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PERSPECTIVE DRAWING OF THE FITZWILLIAM MUSEUM, CAMBRIDGE

Arnold Dunbar Smith and Cecil Brewer

Drawn by Cecil Brewer

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JOURNAL OF THE ROYAL INSTITUTE *of* BRITISH ARCHITECTS

VOL. 42. 3RD SERIES

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Journal

The R.I.B.A. general meetings fulfil many purposes, some purely instructional, others critical and controversial, while others give opportunities for the honouring of living architects by the presentation of awards; but no purpose that could be served by a meeting is more worthy of the occasion or more firmly established in Institute tradition than that so gracefully fulfilled by Mr. H. M. Fletcher on Monday a fortnight ago. Mr. Fletcher turned the opportunity that he had been given to make an eulogium on the work of Arnold Dunbar Smith and Cecil Brewer into something much more than a formal tribute. His paper had, in its own way, the same qualities of scholarly practical design that characterised the work of the two architects which was the subject of his paper. It was in the fullest meaning of the word an "appreciation" by one who could speak not merely with the wisdom of a critic but with the true understanding of a contemporary and friend.

Smith and Brewer were fortunate in having built as two of their chief works buildings which are not so subject to the capricious and iconoclastic tastes of our brave new world as many buildings which architects must design to-day, knowing only too well that they are really nothing more than temporary buildings to be pulled down to give way to bigger and more up-to-date shops or offices or houses, whatever they may be, as soon as the need arises. Both their great museums at Cardiff and Cambridge are buildings which will be standing maybe hundreds of years hence as examples of the true "classic" architecture, as Mr. Fletcher described it, of the early twentieth century.

In speaking of the Cardiff Museum, Mr. Fletcher mentioned one small point of considerable interest. He said that Sir Cyril Fox, the present Director of the Museum, was determined to keep the floor spaces open as far as possible. Everybody knows how buildings have been ruined architecturally by the habit of our forefathers, and ourselves too, of cluttering-up every available inch of a floor with furniture, completely destroying the spatial qualities possessed by the building

as originally designed. This was seen very vividly by comparing several of the architects' perspectives exhibited in the recent Library exhibition with the present state of the same buildings. There was Alfred Waterhouse's Natural History Museum, for instance. The entrance hall is now so massed with showcases that the clear effect which Waterhouse obviously wanted is absolutely lost. The museum has gained a stuffed elephant or two and gargantuan models of some more flies and fleas but has lost its architecture, but not irretrievably. Euston Station Hall, which was designed by Philip Hardwick, is another case: there, not content only with kiosks and stalls, the railway company built a complete house to accommodate the ticket office. Despite valiant attempts in recent years to redecorate the hall to bring out some of its true qualities, it will only be the murdered remains of an architectural idea until the opportunity comes of restoring the open space shown in Hardwick's drawing in the R.I.B.A. Library. The problem is of some interest to the R.I.B.A., for the Library in the New Building is a room which would admirably admit tables and showcases down the central aisle—admirably, that is, according to the old ideas, but wisely the Literature Committee resolved from the first, and Mr. Wornum too, that never until the pressure is too great to be resisted (and that, we hope, will really be never) shall the Library be spoilt in this unarchitectural way.

As the result of several generous gifts and as the result of clearances from surplus library stock the R.I.B.A. has a number of books which it wishes to offer to the Allied Societies. The Secretary or Librarian of any society who wishes to participate in the distribution should write at once to the R.I.B.A. Librarian, who will send him a list of the books on which the would-be recipient can mark his choices. There are not many books—only about 60—but some are of considerable value and most of the others, though some of the few technical books are rather out of date, will make useful additions to any general architectural library. Those who wish to see the list are asked to write to the Librarian by the end of this month at the latest.

The value of local public libraries is very little appreciated by many people who express dissatisfaction with the facilities for getting technical books outside London, and few architects are probably aware that there is an exchange system worked by the National Central Library by which any applicant for an important out-of-the-way book can obtain it on loan, even from some overseas and foreign libraries, if it is not available in any English library. Particulars of the exchange scheme can be obtained from any public library or from the R.I.B.A. Librarian. Members are also reminded that public library authorities are generally delighted to have suggestions made for the purchase of books if they can be assured that a demand exists. The Allied Societies might do much to increase the value of the architectural collections in their local public libraries by getting into direct touch with the librarians and representing their needs, which are likely to be met as far as local library finance permits if the representation is made with the whole force of the influence of a society.

The London County Council have appointed Mr. E. P. Wheeler [F.], until his promotion Senior Divisional Architect, to be Architect to the Council and Superintending Architect of Metropolitan Buildings, as from 1 April. At a meeting of the Council soon after his appointment had been announced, special reference was made to the importance of Mr. Wheeler's post. The Chairman of the General Purposes Committee said that the increased activities of the Council demanded a man of great technical knowledge, driving force and per-

sonality, and that it was a matter of real satisfaction to the Council to be able to recommend as chief officer a man already in their service. Mr. Wheeler was then given an opportunity which can only rarely have been given to newly-appointed public servants, of addressing the Council which appointed him. He thanked the Council for their congratulations and said that he felt fortified both by the kindness shown to him by the Council generally, and by the great compliment paid through him to the staff of the Architect's Department.

The R.I.B.A. Dramatic Society are to present a programme of Three One-Act Plays on Monday, 29 April, and Friday, 3 May. The Plays are:—

"*X = O, OR A NIGHT OF THE TROJAN WAR*," by John Drinkwater.

"*SHALL WE JOIN THE LADIES?*" by Sir James Barrie.

"*THEY REFUSE TO BE RESURRECTED*," by N. K. Smith.

The first performance is one of the regular *Kalendar* evenings which the Dramatic Society has been asked to fill by the Social Committee.

Tickets for that night will be 5s. and 3s., and will include refreshments. The second performance is an extra one, given at the request of the Dramatic Society itself; tickets for this performance will be 3s. and 1s. 6d. The curtain will rise at 8.30 at both performances. Tickets from the R.I.B.A. or from Miss Caldicott, at the A.A.



ARNOLD DUNBAR SMITH
1866-1933



Cecil Brewer
1871-1918



FITZWILLIAM MUSEUM, CAMBRIDGE

THE WORK OF SMITH AND BREWER

BY HENRY MARTINEAU FLETCHER, M.A., F.R.I.B.A.

A PAPER READ BEFORE THE ROYAL INSTITUTE OF BRITISH ARCHITECTS ON MONDAY, 25 MARCH
THE PRESIDENT, SIR GILES GILBERT SCOTT, R.A., IN THE CHAIR

AT a time like this, when so much is in the melting-pot that few can say certainly what they admire or what they are after, when ideas and ideals in architecture are changing so fast that none can foresee whether posterity will have one kind word for what this age is bringing forth, it is good to spend a little time in looking back at the immediate past and taking stock of its results. There are many of us, contemporaries and friends of Arnold Dunbar Smith and Cecil Brewer, who hold their work to be the most distinguished architectural output of the early twentieth century in this country.

It is less widely known than that of other men who were practising at the same time, and far less widely than it should be. There are in London only three buildings which can be pointed out from the street as designed by them—first, the Mary Ward Settlement, originally Passmore Edwards Settlement, in Tavistock Place, brilliant in promise but immature; next, the additions to the town house of the Bishops of Ely in Dover Street which converted it into the Albemarle Club—this has a brick front which gave distinction to Berkeley Street until it was spoiled by alteration; and third, Messrs. Heal and Son's



MARY WARD SETTLEMENT, TAVISTOCK SQUARE

premises in Tottenham Court Road, which in itself for most Londoners sums up all they know of Smith and Brewer's work.

It is natural in considering the work of partners to ask how much is due to one and how much to the other, but if the partnership is a true one, the question cannot be answered except in general terms of temperament, and to such terms any answer which I can attempt must be restricted. Two men of markedly different types found the means of fusing their separate gifts in the creation of works of architecture. The result was given to the world as the work of Smith and Brewer, and that is literally and exactly what it is. The fusion was so complete, and the contribution of each, where it was not identical in kind—and in a real partnership there must be a large identity of view—was so truly complementary to that of the other, that I am convinced that the work of the two was finer than either could have produced alone.

The one exception I would make to the hesitation I feel about distinguishing their individual contributions is the National Museum of Wales at Cardiff. Here the disposition of the reserve galleries, which probably won the competition, originated with Dunbar Smith. This was known to their friends at the time and was freely acknowledged by Brewer, while Smith characteristically refused to claim sole credit for the design.

Nor do I even distinguish the later work of Dunbar Smith from that which they produced together. The survivor, whichever he be, of a partnership that has lasted

over twenty years cannot be unaffected by what has gone before. It is true that in this later work, such as the buildings at Armstrong College, Newcastle, or the Cambridge Lecture Rooms, there is a more direct solution of the problem, an absence of the tendency, noticeable in the earlier joint work, to play with subtleties of plan-form, to introduce frequent points of interest. But this may well be due to one or both of two causes, the need for strict economy to suit post-war finance, and the trend towards austerity which is seen in the maturer output of many artists. Had Brewer been the survivor, he might equally have developed in the same direction. But these, alas, are mere conjectures.

Their output, though consider-



FIREPLACE, MARY WARD SETTLEMENT

able, cannot be called large—indeed work such as theirs cannot be produced in bulk—and the quality is so consistently high that the task of choosing examples to illustrate a short paper is bewildering.

The partnership started, and with it the work, or at any rate the considerable work, of each of the partners, with the Passmore Edwards Settlement in Tavistock Place. This was a competition, with Norman Shaw as assessor. There were men of experience and reputation against them and the result was a surprise. Smith and Brewer had both been residents in the Settlement in its old quarters, but their success showed not only the advantage of familiarity with the needs of the institution but the still greater advantage of being better architects than the older men. The decision received no criticism—they had won. The year was 1895; Dunbar Smith was 29 and Brewer 24.

The plans shown are not the competition ones, but those of the Settlement as built, the scheme having been considerably enlarged in the interval. But the idea is the same; it is stated with a clear directness uncommon, especially at that day, among men in their twenties, and the requisite separation and interconnection of residential, educational and public assembly elements is managed easily and without fuss.

Externally the building is picturesque, and its spaces of brick and plaster are broadly and seriously handled in a spirit of youth and adventure which keeps its attraction in spite of changes of fashion. Inside and out, there are dashing experiments with details, the stone porch and entrance doors, the wide eaves, where the flanges of steel joists were cantilevered out to form flat modillions, the public hall, lighted by large dormers penetrating a barrel vault, a treatment which reappears many years later in the Armstrong College Library, and a delightful little fireplace, marked by its peaky mouldings as the work of the 'nineties, and by its grace and brio as that of Smith and Brewer. (Fig., page 630.)

The years from 1890 to the War were a period of great activity in the building of country houses. Ernest Newton, Macartney, Lorimer and many who are still alive were doing work which was eagerly studied abroad and raising our architectural credit to a peak which it has not often reached. In this good company the names of Smith and Brewer stand high,

stand indeed with the highest. Their country houses, to be found mostly in the home counties and East Anglia, have an individual flavour, but it is never exaggerated into eccentricity; they are based on tradition but never archaistic; and there is always a touch of novelty in planning and detail, a reasonableness and an elegance which save them from vulgar exuberance on the one side and from the equally bombastic and much more self-conscious quality known as starkness on the other. Their work has a gaiety, an enjoyment in what they are doing, which comes from mastery of planning, design and the use of materials. You cannot be gay with materials if you are worried about them. This mastery was largely due to their early training in the Arts and Crafts movement and their familiarity with its leaders, particularly Lethaby, who was interested and delighted by their success with the Passmore Edwards Settlement.

In domestic work the influence of the client is, or was, looked upon with suspicion by some architects, with neglect by others. Smith and Brewer never made this mistake. They met the client half-way and took him into something like partnership. This gives freshness and flexibility to their designs. "A house of Smith and Brewer" is not only that, it is "A house of Smith and Brewer for Mr. X or Mrs. Y," and the owner of one of these houses will not hear the architects talking at him all the time. Believe me, it is the better way.

Turning to specific instances, Nower Hill, Pinner

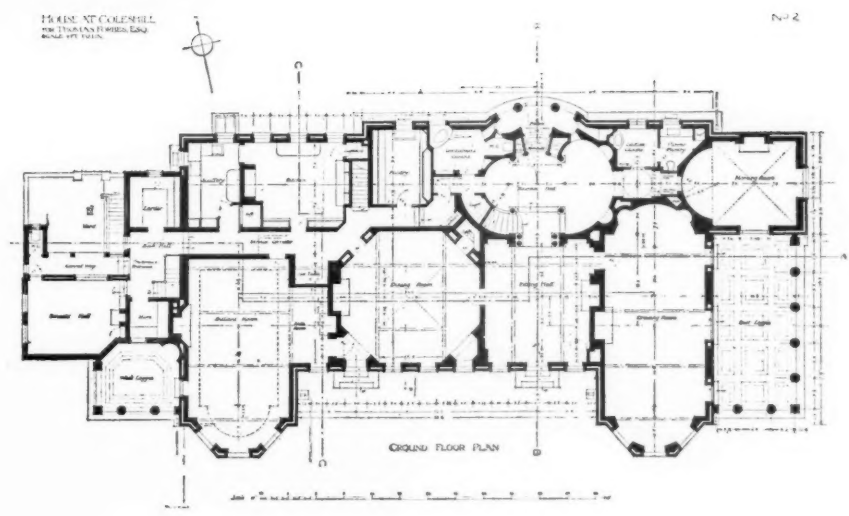
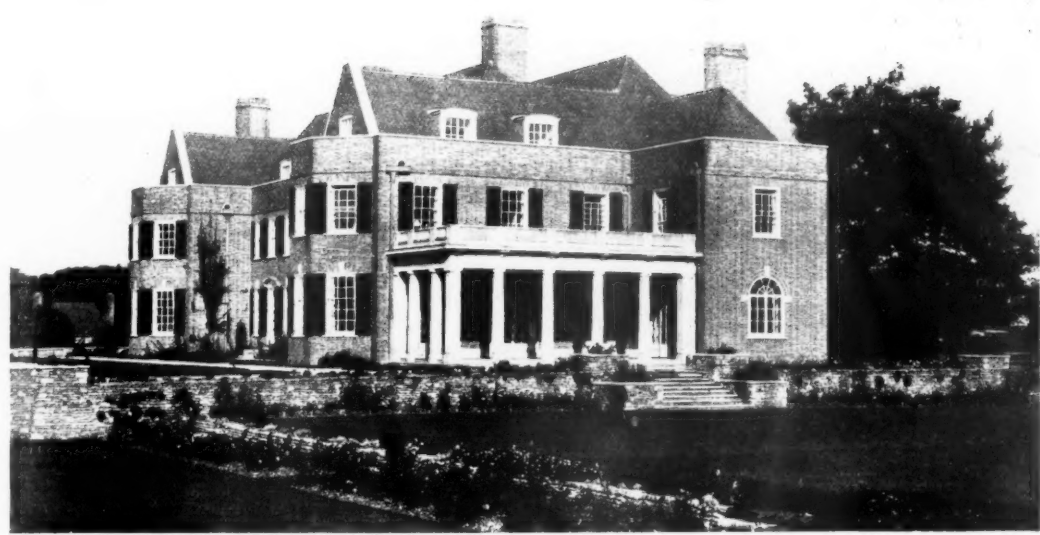


FIVES COURT, PINNER



Above: ACREMEAD, CROCKHAM HILL

Below: NOWER HILL, PINNER



COLESHILL, NEAR AMERSHAM
Above: The Garden Front
Below: Plan

was an early alteration which altogether changed the appearance of the house. It shows a delightful welding of house and garden, and internally is worth study for the variety of shapes in rooms and halls.

The Fives Court, also at Pinner, shows how such an intractable thing as a fives court may be used to make rather than mar a design.

Even the little cottage at Oxshott is not too little to show a characteristic blend of breadth and piquancy.

Ditton Place, Balcombe is on a more ambitious scale, and the panelled and vaulted gallery on the ground floor should be studied in the large photograph in the exhibition. The garden front shows Wren's influence and has something of his homely stateliness.

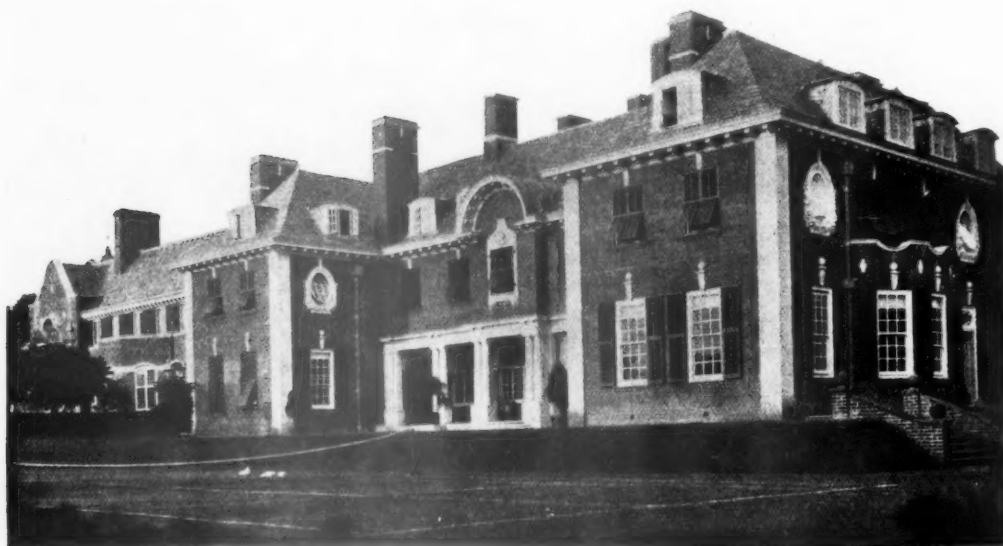
An unusual experiment in walling is seen at Acremead, Crockham Hill, built of Kentish rag. It is handled with great skill to bring out its variety of colour and texture, but remains, to my thinking, an unsympathetic material. The garden front, to be seen in the exhibition, is a powerful design, but does not the rag-stone give it a touch of grimness? The entrance front, however, seen here, is a splendid success, so interesting in its grouping, so homelike in its

proportions, that the masonry falls into place and helps.

The house at Coleshill near Amersham is mature work, designed before or during and carried out after the war. There is a suggestion of Robert Adam in the varied shapes of the principal rooms and their skilful vistas, which, unlike those of the eighteenth century, are not tiresomely prolonged. Externally, the house is simply and finely massed; the loggias required by modern country life are sparingly and tellingly detailed. This is the finest house in the series and should be carefully studied in the photographs. Here I can only show the entrance hall.

To this group belongs the East Anglian Sanatorium at Stoke-by-Nayland in Suffolk, not perhaps quite pioneer work, but certainly among the earliest to give architectural shape to the recent medical discoveries in tuberculosis treatment. The long lines of windows are relieved by four bays—one at each end and one each side of the central loggia.

Meanwhile came commissions for town work of a semi-public character, or at least on a more than domestic scale, which were good training towards the larger kind of design needed later in the museums.



DITTON PLACE, BALCOMBE



THE EAST ANGLIAN SANATORIUM, STOKE-BY-NAYLAND, SUFFOLK

The premises of Messrs. Heal and Son are well known, and among the rowdy tatterdemalion buildings of Tottenham Court Road they hold the attention like a rhythmic ceremonial pageant, with a rhythm of threes and fives boldly and subtly maintained across and up and down the façade. This was one of the first shop-fronts in London where the windows were recessed under shelter; the recession is recalled in the third storey, while the first and second are linked by lead panels decorated in colour with trade emblems. Nowadays, when we have to deal with external walls which are nowhere more than 4 inches thick, it is very difficult to obtain effects of that kind. I am afraid it is a matter almost of the past. The marble facing of the ground floor piers and shop fascia is proclaimed as a veneer by the decorative bronze pins which fasten it to the structural work. A true designer will always jump for joy at a difficulty and turn it into an opportunity.

The lovely circular stair was originally carried up from basement to first floor, but has lately been extended to the top. At the same time, the wall treatment was changed from enriched plaster panels to large shallow flutings. The change has always puzzled me, for it seems to be neither an improvement nor a worsening—just a change. Why? Note how the concrete steps are covered with wooden treads for foothold, but, on the risers, the middle

part alone is faced with wood like a stair-carpet leaving the structural material to be seen.

For the work at the Albemarle Club the keynote was set by the existing house, an accomplished piece of eighteenth-century design by Sir Robert Taylor. The additions were made with great sympathy and no copying—it is impossible to mistake Smith and Brewer's work for Taylor's, but you pass from the one to the other without a jar. The card room was a brilliant adaptation of one of the old attics, and foreshadows in its shape and feeling the Court Room of the Welsh Museum. The main staircase of the additions is altogether new, with a hint, rare in their work, of the baroque in its planning. The principal flight, as you look down it, starts with straight risers; these gradually begin to curve, and so on more and more till the bottom step spreads out in a superb circular sweep. They were always quick to seize all the implications of a staircase, and there is nothing more fascinating in all their work than this little pair of curving flights on one of the upper floors.

Mention should be made of a responsible commission which came to them in early years, the reconditioning of Wren's Sheldonian Theatre at Oxford. There was much repair to be done and much replanning, for the theatre was a dangerous fire-trap. The work cannot be illustrated; it was



THE LIBRARY, ARMSTRONG COLLEGE, NEWCASTLE

done with a conscientious reverence for Wren which left few traces behind; but the commission to deal with a building of such historic and national interest shows the growing confidence which they inspired.

Before we turn to the great museums of Cardiff and Cambridge, let us look at the post-war work of Dunbar Smith. First, the Library of Armstrong College, Newcastle, which was won in competition. It is noteworthy how seldom, if ever, they entered a competition without winning it. This is a bright spot among the ill-grouped and mediocre buildings of the College. Its charm speaks for itself, and it is carried out with such scrupulous care for every detail of its use that visiting librarians have called it the library they had dreamt of. The reading room, as I mentioned, is a mature development of the Public Hall at the Mary Ward Settlement.

The success of the Library led to other buildings for Armstrong College, the most important of which is the Students' Hostel, a dignified brick building grouped round an open quadrangle.

To the Cambridge University Lecture Rooms in Mill Lane, his last completed work, illustrations do no justice; they must be visited to be appreciated. Here is the front in the narrow street, a scholarly

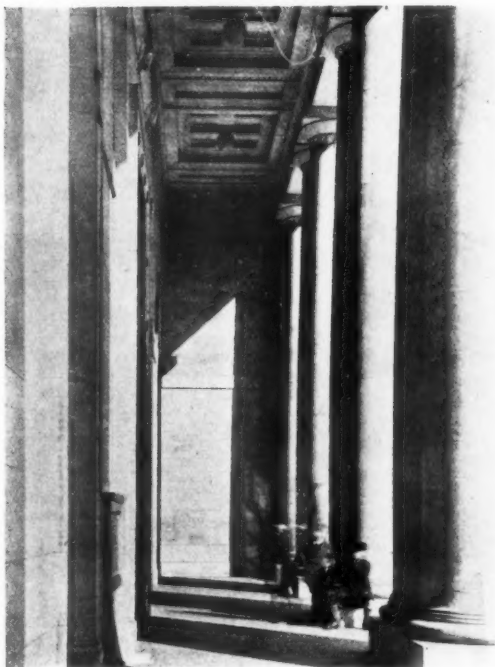
piece of plain brickwork of Georgian type. For the interior, good speaking and hearing are the motive; acoustic shapes and materials are the stuff of the design. In the lecture rooms there was no question of "sacrificing" other things; other things were not wanted, and therefore were not considered, and the result is one of singular completeness and satisfaction. The Library is a further development of the Armstrong Reading Room.

The National Museum of Wales is one of the great buildings surrounding Cathays Park with which Cardiff has shown the way in civic grouping to all other cities in these islands. With regard to the open space in front of the buildings, however, it is hardly possible to conceive of a more futile arrangement of lines and spaces, and it is disappointing that three such magnificent buildings should not be more worthily approached. I only hope that the city of Cardiff realises it and will set about putting it right. It would not require very much outlay, but it would need a great deal of thought. The Museum is in line with the Town Hall and the Law Courts, the brilliant work of Lanchester and Rickards, which were already built at the time of the Museum competition, and it forms with them the leading

trio of the whole group, facing south from the park to the town. The transition from Justice to the Muses, from Lanchester and Rickards to Smith and Brewer, is skilfully and urbanely done; no attempt is made to follow the earlier buildings in style or in detail—indeed, had such an attempt been made the result must have been forced and unnatural, owing to the difference of purpose in the buildings and of temperament in the architects—but community of service has been subtly acknowledged by a sort of bow and curtesy across the street. The material, Portland stone, and the alignment of the principal fronts were laid down by the authorities, but it was the architects who decided that the height of the main cornice should coincide, although the Town Hall has two storeys below cornice level and the Museum one. The differing scales of the buildings are beautifully harmonised in this way; this will at once be realised if you imagine the cornice-line of the Museum five or six feet higher up than that of the Town Hall, as it well might have been. More than this, although the side elevation of the Museum is much longer than that of the Town Hall, the first pavilion of the former is made exactly to face the central pavilion of the latter. The scale is further preserved in the rustication courses, which are of the same height in the two buildings. In the competition design there was an additional reference to the Town Hall, in that the main front of the Museum was finished at each end by a splayed projecting bay, but this was rightly abandoned in execution as an unnecessary piece of symmetry, out of character with the severer design of the building.

The plan is magnificent, and as more sections are built its full nobility becomes more apparent. As already mentioned, its success in competition was owing to the disposition of the reserve galleries all round the exhibition halls. These galleries are on a scale never before attempted. They save the exhibition halls from overcrowding, the bane of museums, and make it easy to change the collections on show from time to time, as well as providing quiet accommodation for students. The original idea is to be found in the conditions of competition, and was due, I believe, to the then director, Dr. Hoyle, but no other competitor seized on it and developed it with such mastery as Dunbar Smith.

The exterior treatment is restrained, with a felicity in mass and detail which looks like the inevitable outcome of the conditions, but is, of course, the result of long-matured practise in design and of severe study of the particular problem. It is no easy thing to lead up to a dome in the centre of a long and

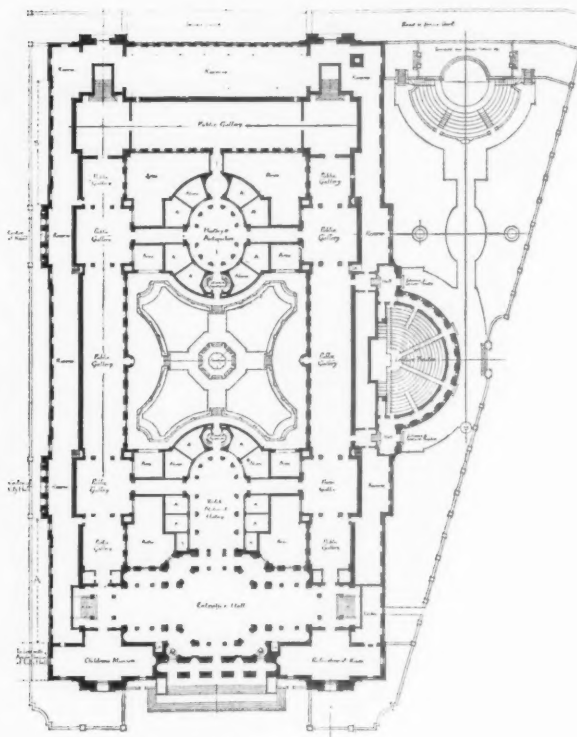
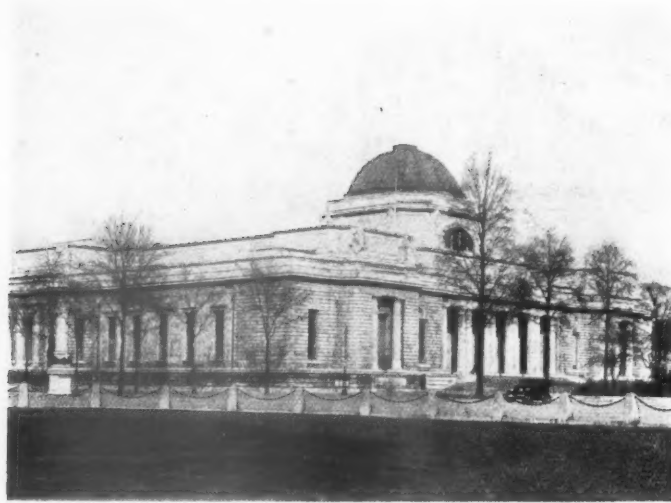


THE PORTICO, NATIONAL MUSEUM OF WALES

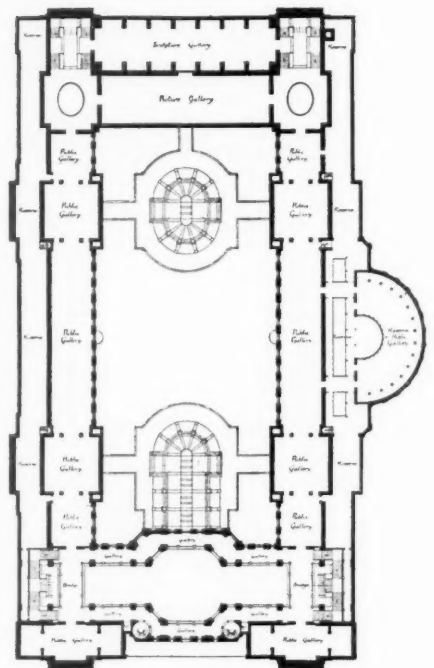
nearly level front. This is done subtly and sensitively by the stepping up of the skyline from the angles of the building to the adjoining pavilions. The level thus obtained is kept in elevation but lowered in perspective by the recession of the centre to form a perfect base for the dome to rise from, while the groups of sculpture are admirably placed to help the transition of planes and give richness where it is needed. To appreciate the gradual development of this noble design it is well to compare the competition perspective with the finished work.

On the flanks the special arrangement of the Museum, the surrounding of the exhibition halls by reserve galleries, is clearly expressed by the different heights of the outer and inner walls. Here again interest is obtained by breaking the higher level forward over the pavilions with groups of sculpture to soften the long lines of mouldings and angles. On the east side the expansion of the site from front to back gives room for the lecture theatre, whose circular form brings in a new element, treated with a simplicity which gives full force to the contrast.

When you have gone round the outside of the Museum, climb the entrance steps, stand facing



GROUND FLOOR
PLAN
Scale: 1/1000

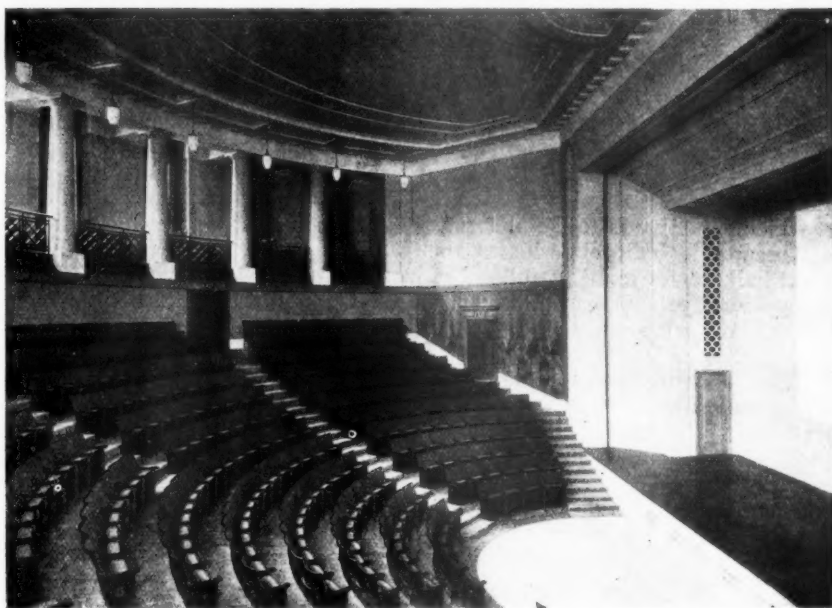


FIRST FLOOR PLAN
Scale: 1/1000

NATIONAL MUSEUM OF WALES, CARDIFF

Above: General view

Below: Ground and first-floor plans



NATIONAL MUSEUM OF WALES
Above: Entrance Hall
Below: Lecture Theatre

outwards, so that you can see neither the building itself nor its companions, and look back over the muddled open space which unworthily sets them off, past the municipal lamp standards, ordered from an ironfounder's catalogue, at commercial Cardiff. Then turn and enter the great hall of the Museum. Of all the halls of public buildings constructed in our time, this is, to my mind, the finest. The central space is kept open and rises through the two storeys of the Museum to the dome, at whose base are four large lunette windows. There is a gallery at first-floor level, and bridges are thrown across the hall near the two ends to connect this gallery with the main first-floor rooms, and beyond the bridges are the two main staircases. A second gallery at the base of the dome gives access to the Library and the Court Room. The contrast of heights and of light and shade is managed with rare skill, and was entirely developed after the competition. In the original design the Court Room with its much lower dome occupied the central position on the first floor, and no part of the great hall rose above ground-floor level. The decision of the architects and the Museum authorities to give up so much accommodation and to raise the dome on an octagonal drum has been more than justified. The impression of nobility and beauty outweighs a ton of utilitarian considerations, and is greatly strengthened by the determination of the authorities, and especially of Sir Cyril Fox, the director, to keep the floor space open except for a few carefully chosen exhibits. May their successors resist every temptation to do otherwise!

It should be noted that until the gallery of Welsh natural history, which I believe is to be the next section of the Museum, is built opposite to the entrance, the great hall cannot make its full effect. You are brought up short by the temporary wall and feel cheated of the distant perspective which should open before you as you enter.

A surprising effect, which cannot be shown in slides or drawings, results from the use of pinkish glass in the lunettes of the dome. The colouring is too faint to be seen in the windows themselves, but a warm glow is spread all over the central area, clearly contrasting with the cooler light in the wings. This is the one approach to theatricalism in the whole of the architects' work, and is justified by its discreetness and its success. The only parallel I can think of is the blue light in the *Dôme des Invalides* around the tomb of Napoleon, which, as might be expected from the nation and the hero, is theatre pure and simple.

The great exhibition halls are in the sober and admirable tradition of the British Museum, with no architectural features to distract attention from the contents, but just so much detail in piers and ceilings as will save the galleries from starkness and clothe them fitly to be parts of a national monument.

The Circular Gallery, above the Lecture Theatre, is delightfully conceived for the display of small cases, with its perpetual hint of something more to see where the curves run out of sight.

The Lecture Theatre is designed on strictly acoustic lines, with reverberant and absorbent materials placed where they are needed, but no one would suspect it. It is masterly in form and colouring, a sober harmony of browns and warm greys and buffs and whites, while the absorbent stuffs are fastened to the walls with chromium strips to give sparkle.

I should like to take you step by step through the entire Museum, but must be content with mentioning the domed Water-colour Gallery on the first floor, the charming circular stair leading to the second-floor gallery, and the Library and Court Room above, two large and dignified square rooms lighted by lunettes, with finely designed oak fittings and panelling.

The Fitzwilliam Museum at Cambridge presented a formidable problem. The old building is not a masterpiece; there must be something wrong with a store-house approached by a Corinthian portico facing north-east and costing, at a guess, not less than the building behind it. But the portico itself, granted that it faces the wrong way and judged by classic standards, is a masterpiece and a splendid preface to Cambridge as you come in by the Trumpington road from London. How to add to this Museum another of equal size or larger?

The natural solutions in the case of such a formal building were either wings on each side, or an extension at the back, or both. But the sites for such additions were unobtainable. The only available ground was alongside the old Museum, facing the street. No kind of symmetrical treatment was possible, for the portico could not be used as a central feature, and to repeat it as a southern wing on the other side of a new central block would have been absurd. Circumstances dictated the scheme. There must be an independent building, designed with the fullest recognition of the requirements of a modern museum, set side by side with the old Fitzwilliam but not in contact with it, and the two must be connected unobtrusively by a gallery towards the back. Cambridge is full of precedents for such a juxtaposi-

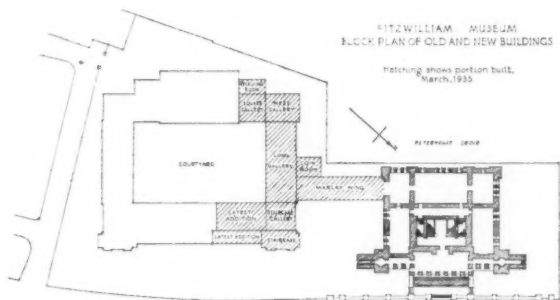


FITZWILLIAM MUSEUM. THE COURTAULD GALLERY

tion of buildings of differing character, and when the new building is finished there is little doubt that the grouping will justify its architects. The frontage line is kept back, and the treatment, though much simpler, is in the same school of design as Basevi's Museum. It may be well studied in the fine pair of perspectives in a single frame, drawn before the work was begun, from which few departures have been made. There is one radical change—the perspectives show the walling in brick with stone dressings, whereas the whole is being erected in Portland stone. Though the building gains in monumental quality, I am not sure whether this is an unmixed improvement. There is a good deal to be said for making a clear-cut distinction between old and new, and the unfinished interior courtyard shows what dignity can be put into the combination of brick and stone. (See *frontispiece*.)

About the galleries there can be no question. Those on the ground floor are side-lit, simple, finely proportioned and detailed. Where cross lighting is used, the windows on one side are kept high up. The

ceramic gallery has an excellently arranged reserve corridor. The staircase, especially in its lower flight and the approach thereto, is simple and stately, in welcome contrast to the crowded, uncomfortable, gaudy double stair in the old entrance hall. It is only fair to note that Basevi is not to be blamed for this, as the whole hall was greatly altered after his death.



FITZWILLIAM MUSEUM
Block plan of old and new buildings



FITZWILLIAM MUSEUM

The central gallery of the old museum with Smith and Brewer's balcony gallery

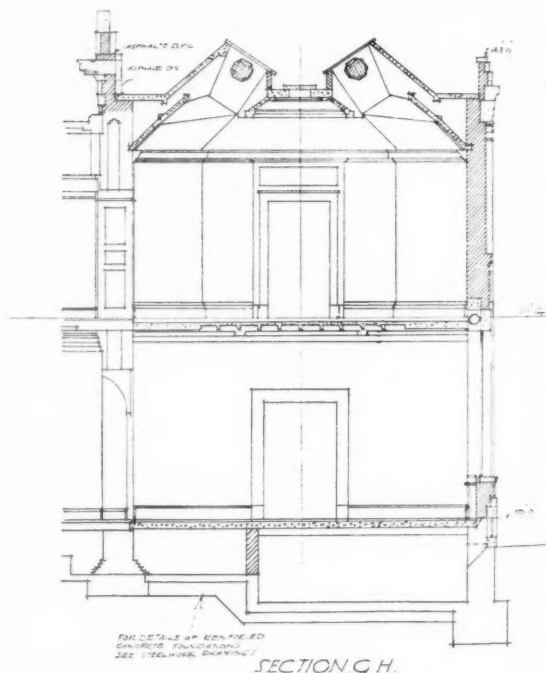
Of the top-lighted rooms on the first floor, is it too much to say that they are the most beautiful range of picture galleries in the world? It is a large claim, but backed by the enthusiasm of more expert and more widely travelled judges than myself I dare to make it. In the older galleries the apparent object is to display the largest possible number of pictures at a glance. The Grand Gallery of the Louvre is just short of a quarter of a mile long, both walls plastered with uncountable hundreds of pictures, and the stoutest heart quails at that tremendous vista. In Le Mans I remember a gallery where not only were the walls concealed by pictures, but pictures, hung face downwards, covered all the elliptical barrel-vault of the ceiling; and there is many a gallery where the bleakness or the vulgarity of the setting distracts you from the contents. If beautiful things are not shown beautifully their beauty vanishes, so why show them? And how should they be shown? Visit the new Fitzwilliam and see.

Here your view is limited to a few pictures at a time. The longer galleries, such as the Marlay and the Courtauld, are divided into bays by cupboards

with slightly splayed sides which project from the wall. The advantages of this plan are several:—

- (1) The wall-space is increased.
- (2) Pictures of one school, one painter or one subject can be isolated from disturbing influences.
- (3) There are three different qualities of light in each bay, and pictures can be hung in that which suits them best.
- (4) The cupboards are of practical use for storage, repairs, the concealment of window-gearing, blind cords, etc.
- (5) The number of pictures seen at a general view is reduced by about 60 per cent., to the infinite advantage of both the seen and the not yet seen.
- (6) The apparent width of the gallery is much reduced; hence a low ceiling does not seem oppressive, and high walls, either blank or covered with undecipherable pictures, may be dispensed with. I cannot find that any disadvantages of the bay plan have been discovered.

After the plan, the lighting. The Marlay Gallery, leading from old to new, was the first. Here the bays have a solid flat ceiling, above which the central alley is roofed with a sloping clerestory each side, carrying a solid coffered ceiling. This is an adapta-



SECTION THROUGH ONE OF THE FITZWILLIAM MUSEUM GALLERIES

tion of the old form of lantern light with sloping windowed sides and flat solid top known as a Monitor light, used in some of Wilkins's original rooms at the National Gallery, where it sprang from a large plaster cove and gave a good diffused light with few reflections. The effect in the Marlay Gallery is delightful, with the long array of sparingly detailed trusses, beams and coffers; there is very little shadow on the picture space, even at the top of the back wall, and hardly any reflection. Blinds have to be used pretty often, as the sun shines directly in, but all gearing and cords, which with their grasshopper legs and untidy festoons are the curse of most picture galleries, are discreetly ensconced in the bay-cupboards.

Before the Courtauld and adjoining galleries were tackled, a New Zealand architect, the late Mr. Hurst Seager, had worked out his ingenious method of roof-lighting—"top side lighting" he called it—to minimise reflection. A description would be difficult to follow, but briefly it consisted of introducing light from the top close to the walls, all round a dark central ceiling. At the Fitzwilliam we find this idea, which I doubt whether Seager ever developed beyond the bare elements, changed by imaginative handling into a half mysterious and wholly fascinating interplay of light and shade, which illuminates the gallery and the pictures with something far beyond the reach of efficiency. The direct light is trapped and reflected and re-reflected so that blinds are rarely used. The scheme cannot be made clear in words, but may be understood from a section, and it is varied simply and easily to suit the different shapes of the Staircase Gallery, the Courtauld and the West Gallery. Only in the Octagon do the multiple lines and planes, set at eight different angles, become too complicated for beauty and the central ceiling weighs down too heavily. There is little doubt that a second attempt would have led to a simpler solution of this difficult problem.

The planning, the lighting and the setting combine to give to the new Fitzwilliam its special quality of distinction, and of the setting it is hard to speak without tiresome superlatives. Sir Sydney Cockerell, the director, has told of the harmony in which he worked with the architects, and they would have been the first to acknowledge his share. This must naturally have been larger in the setting than in the more technical parts, but for this too no small praise is due to them. When the Marlay Gallery was opened it was seen to be a great step forward. It had long been recognised that pictures and other collections gained in intimacy and sense of purpose by being shown in beautiful human

surroundings, and so palaces like the Pitti and the Louvre, and great houses like the Poldi Pezzoli at Milan, the Carnavalet in Paris, the Maison Plantin at Antwerp and Mrs. Gardiner's Fenway Court at Boston were devoted to this purpose. But too often the lighting conditions were worse than imperfect, too often the unimaginative curators lacked the wits to deal with swollen collections, and so masterpieces were hung in dark corners, and the stately rooms took on the familiar aspect of museum galleries and became dispensers of the familiar museum headache. The teamwork of Cockerell and Smith and Brewer put an end to all this. Every part of every room is scientifically and beautifully lighted. Few pictures are seen from any one view-point, there are spacious wall-surfaces around them, with exquisite furniture set about and glowing rugs on the floors; the backgrounds, whether the gold canvas of the Marlay or the warm brown mahogany plywood of the Courtauld, for all their beauty are true backgrounds and do but enhance the pictorial and decorative beauty of the collection. In the Marlay the pier-fronts are used for pictures; in the Courtauld the whole effect has been even more closely studied, and this space is occupied by specially designed cases with mirror glass at the back, filled with majolica of the date and provenance of the principal pictures. If the post-war world has more common sense than the behaviour of its rulers would imply, we may hope that the new Fitzwilliam has smashed up the old kind of Zoo-for-pictures, and that future galleries will base themselves upon it, with such adaptations and possible improvements as their several needs may suggest.

The word which to my mind sums up the architectural qualities of Smith and Brewer's work is "classic," if you use it not in its historical but in its spiritual sense, implying the untiring search for proportion and perfection. By proportion I mean rightness of emphasis, so that first things are put first and last things last; by perfection, rightness of finish, so that first and last things alike receive the degree of finish proper to their place in the sequence.

All through their work you feel that the purpose and the use of the buildings come first and dictate the main lines of the design, and that these main lines are preserved unwaveringly through all the working out. There is no purer indication of the classic spirit than the refusal to be tempted into side paths by the fascination of incidentals; it is perhaps peculiarly difficult for Englishmen, but only this faculty of refusal can insure clean design. At the same time every relevant incident will be worked

over and polished till it drops easily into place in the scheme.

This may seem to be dry praise, nothing more indeed than a statement of what every serious architect aims at. It is anyhow a difficult aim, a high ideal, and by intense concentration and love of their art Smith and Brewer came nearer to realising it than most of their contemporaries. Such a word as dryness has no application to their work. Look at the illustrations you have seen. What an impression of cleanness, athletic vitality, distinction! To some of the finer works of modern architecture your instinctive response is "Yes—but," to others "Yes, of course." I have never had a doubt to which class these works belonged, and can think of few others of their date which rouse in me that instant and enthusiastic reply.

I cannot close without a word about the two men themselves. When Brewer died, Dunbar Smith

wrote: "It is certain that he had a genius for making friends and that his personality impressed those even who scarcely knew him, so that very many will mourn him and feel that his death has removed one of the vital influences of present-day architecture." And after Dunbar Smith's death a friend wrote: "His unconquerable modesty endeared him to his friends and his clients, but prevented him from receiving the fame and the honours which were his due. He was a delightful companion, full of humour and shrewdness, without a particle of jealousy. To his friends he was a true friend; people turned to him for advice in any architectural or private difficulty and a word of commendation from Dunbar Smith was praise indeed, because of his complete sincerity." My long friendship with Arnold Dunbar Smith and Cecil Brewer was and still is to me, as I know it was and is to every one of their friends, an honour, an inspiration and, still more, a delight.

ACKNOWLEDGMENTS

I should like to express my very cordial thanks to Mr. Lee, secretary of the National Museum of Wales, and Sir Sydney Cockerell, director of the Fitzwilliam Museum, both of whom gave me access to all parts of their museums and explained much that I wished to know about the design and development of the buildings; to Messrs. Heal and Son, for the loan of photographs; and above all to Mr. J. A. Meikle, the senior surviving partner in the firm of Smith and Brewer, without

whose help this paper could not have been written. Unforeseen circumstances have made me lean on Mr. Meikle much too heavily at the last, and he has borne the burden nobly, but apart from that he has been helpful in every way with information and lending plans and drawings and I cannot thank him warmly enough. I must also thank the Institute staff for help in arranging the exhibition.



FITZWILLIAM MUSEUM. MARLAY GALLERY

Vote of Thanks and Discussion

Mr. W. CURTIS GREEN, R.A. [F.]: The beginnings of my friendship with the reader of this paper date back to somewhere about 1898 or 1899, to the same time that I began to know Smith and Brewer. I am very grateful for the privilege of being allowed to move a vote of thanks to Mr. Fletcher for his memorial to them. I know that it has been an obligation which he welcomed, and we, the friends and admirers of Smith and Brewer, are thankful that he has done it.

To know Cecil Brewer was to admire his qualities of heart and head, and to seek his friendship. He and his wife were ideal hosts and ideal guests. I shall always remember the times spent with them and the romance of their Gray's Inn home. I remember that he and I had an exhibition of sketches together in the first of those homes. He was a keen and vivid water-colour draughtsman.

I first met Smith and Brewer at what was known as the "Bricklayers Arms" in Chancery Lane, where a small company of what were then young architects used to lunch. Besides Smith and Brewer there were Fletcher, Dunn, Watson, Troup, Weir, Eden and Godfrey Pinkerton, and a good many others whom I cannot at the moment recall. Cecil Brewer was one of the brightest of that company; he was bubbling over with vitality and with good fellowship, and looked even younger than he was, as he always did.

Then there was Dunbar Smith, so shy, so exact, so shrewd. Cecil Brewer, if I may say so, was a 6B pencil man; Dunbar Smith was a 6H pencil man, and the one was complementary to the other. I saw it as one of the few ideal partnerships, a partnership more fruitful and perhaps at a higher level than any other of that time.

It has been said that the successful man should have his head in the clouds and his feet very near the earth. Is it possible that Cecil Brewer might have beaten the air and Dunbar Smith never left the ground but for their friendship and co-operation? I do not know. It is certain that they were in deadly earnest. Both revered their art and its great traditions. Fresh and original as their work was, they held fast to and treasured the high thought and great emotions of a traditional art. They knew in themselves that they were becoming members of a long sequence of torch bearers; they had dedicated themselves to work that was not only worth doing, but that would live after them.

When Cecil died, about twenty years ago, his intimate friends, and I am sure Dunbar Smith, said "Could you not stay longer? We need you, your work and your help." We still miss him. How he would have revelled in the breath of life that is stirring the waters! But if with our limited horizon we still miss him, yet we know that while the material things change, the spiritual things endure.

Mr. A. H. LEE, M.C. (Secretary of the National Museum of Wales): It is with pleasure that I rise to second the vote of thanks to Mr. Fletcher for his interesting paper upon the work of Messrs. Smith and Brewer—we shall all go away full of admiration for the work carried out by the two architects who are being honoured this evening—for it is a great honour to any architects that the Royal Institute of British Architects should devote an evening to a review of their work. It must, I am sure, be a matter of extreme satisfaction to Mrs. Dunbar Smith and Mrs. Cecil Brewer, both of whom are here this evening, and to all the friends of the two architects, that the Royal Institute should so honour them.

Mr. Fletcher has placed everything before us in a most admirable manner. I wish that Sir Cyril Fox, the Director of the National Museum of Wales, could have been here this evening in order to undertake the duty which has been entrusted to me; he has the gift of working up enthusiasm and is, moreover, able to "talk architecture," whereas I cannot. I shall therefore confine my few remarks to more personal matters and to the association of Messrs. Smith and Brewer with the National Museum of Wales.

I must be getting old in the service of the National Museum of Wales, for I well remember the architectural competition away back in 1910. Some of you may recall that it was one of the most important competitions which had taken place for some years and that it attracted many of the most distinguished architects of the day. No less than 130 designs were submitted, and design 82 was selected by the assessors. I call to mind opening the envelope numbered 82 and reading out to my council the names of A. Dunbar Smith and Cecil C. Brewer.

I should like first of all to say a word or two about Mr. Cecil C. Brewer. He passed away in the early days of our building operations, during the war period. I knew him quite well, but I had not that long association with him that I had with his friend and colleague, Mr. Dunbar Smith. I say "friend and colleague," because I was really impressed by the true friendship and understanding which existed between the two partners.

As for Arnold Dunbar Smith, I claim his close friendship from 1910 until his passing away—a period of 24 years. I am sure that I am voicing the views of all concerned with the National Museum of Wales when I say that we realise our good fortune in falling into the hands of so brilliant and yet so modest and unassuming an architect as Dunbar Smith. He was, I suggest, far too reserved. I do not know, but perhaps professionally this may have been to his own disadvantage. I sometimes used to think that, being of a retiring nature, he was perhaps just a little impatient of councils and committees and would have preferred to carry on with just a couple of officials. I may say, however, that he was very highly appreciated by my council, and upon the occasion of the completion

of each block of the great National Museum of Wales a resolution was passed by my council placing on record its indebtedness to the architect for his exceptional services.

I have referred to his unassuming nature—my council decided that the architects' names should be carved upon our building, and we selected a suitable stone in a prominent position upon which this record should be placed; but Dunbar Smith selected a position low down and round the corner, where no one is likely to see the inscription. Again, I urged Dunbar Smith to have his portrait painted for preservation in the National Museum of Wales, but it did not materialise, and it was only after much coaxing that Mrs. Dunbar Smith has now been kind enough to carry out my wish.

As far as the important matter of client and architect is concerned, my old friend was everything that could be desired—we treasure happy memories of him in Wales. The firm of Smith and Brewer was a great firm, and one which has left, as you have seen, memorials to its genius in widely spread parts of the country. The firm is now in the safe keeping of Mr. J. A. Meikle and his partners. We have had many years of happy association with Mr. Meikle. May the firm of Smith and Brewer continue to prosper! The sooner we get them busy on extensions to our building the happier we shall be.

In conclusion, I reiterate what I said when I began, that it is with pleasure that I second the vote of thanks to Mr. Henry Fletcher for his most interesting paper.

The PRESIDENT: Before opening the discussion, I should like to say how much we appreciate Mr. Fletcher's paper to-night and also the fact that he has specially risen from a bed of sickness to attend here to-night and to read the paper himself.

Mr. J. A. MEIKLE [A.]: It is a very fortunate circumstance that an old friend of Dunbar Smith and Cecil Brewer should have given this review of their work. It is obvious that his knowledge of the men has afforded him the possibility of going into the question with a fuller understanding than would have been possible in the case of a stranger. I felt very keenly the quotations which he read from a letter from Mr. Dunbar Smith on the death of Mr. Cecil Brewer and from a friend of Mr. Dunbar Smith on his death; the remarks in those letters were very much to the point and beautifully expressed, far beyond anything I could hope to say.

I had in their office almost thirty years' experience with Mr. Brewer and Mr. Dunbar Smith, and I can say of those years that nothing could have been more pleasant and delightful and more beneficial to me in every sense. It is a very great pleasure to me to support the vote of thanks to Mr. Fletcher for his delightful lecture on the work of these two architects.

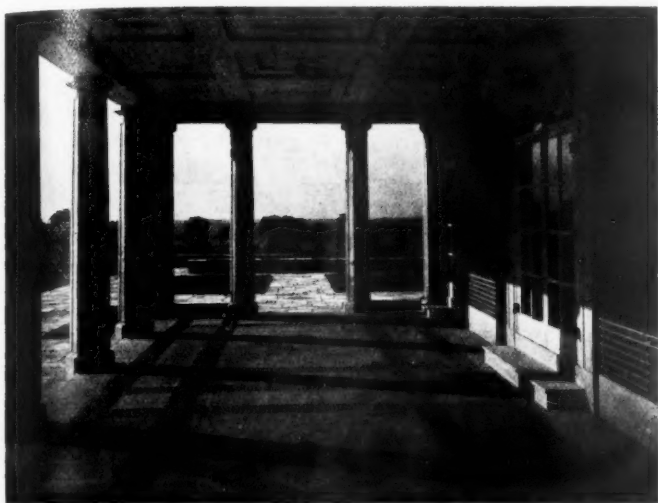
Mr. FRANK LISHMAN [Ret. F.]: I think the Institute is to be most heartily congratulated upon arranging for this paper; and, if I may say so, Mr. Fletcher is to be congratulated on the way he has presented his subject. I feel that he has dealt with it in a way that the most jealous of Dunbar Smith and Cecil Brewer's friends and colleagues would like and expect, and I think that is saying a very great deal.

There have been certain personal references as well as comments on the architectural work of Smith and Brewer, and I think it is perfectly right and proper that that should be so on this occasion. It was very gratifying to hear Mr. Fletcher speak of a measure of gaiety in connection with their work. I have often felt that there was a certain debonair and blithe feeling in the work of Smith and Brewer which is rarely seen—and I say that without any disparagement of the work of other contemporary architects.

But, as Mr. Fletcher has said, when it comes to their architectural work in partnership, how much of it was Dunbar Smith and how much Cecil Brewer could certainly not be assessed. I think that that was a result of the extraordinary personality of them both. I think it is also of interest, when one sees the product of their architectural collaboration, to notice how smooth and easy and charming it invariably is, in spite of what were often extremely complicated requirements in plans and sections, rights of light and air, party walls and things of that kind. I well remember Cecil Brewer saying, when they were doing Heal's premises in Tottenham Court Road, that the internal problem nearly beat them; they felt right "up against it," but who would imagine that on contemplating the external front of that building? It



COLESHILL, NEAR AMERSHAM. THE STAIRCASE



COLESHILL, NEAR AMERSHAM. THE LOGGIA

was the same with the Albemarle Club, which was a most complicated interior plan and section, yet we have seen the result from the photographs. That was Smith and Brewer.

I was able to have some very small insight into the inner working of Smith and Brewer's office, although I was not a member of the staff, and I was impressed by the tremendous sense of loyalty to them which was inspired in their staff. I am quite certain that any member of their staff—they are not all living now—would say that no principals could be more sporting and more generous or could display a stronger feeling of real comradeship with all the members of the staff down to the office boy. There must be those who were office boys in their office who feel grateful beyond measure for their exceedingly generous attitude towards anyone who worked with them.

It has been a great satisfaction to me to be here this evening and to hear this paper. There is an exhibition of drawings by Smith and Brewer upstairs, and I hope that many of those who have not been able to be present tonight will take the opportunity of seeing those drawings before the exhibition closes.

Mr. FRANCIS HOOPER [*Ret. F.*]: Perhaps you will allow a retired member of the Institute to say a word in support of this vote of thanks, which is so well deserved. Happy is the man who has a sympathetic biographer! Allusion has been made to the building which first drew the attention of contemporaries to this happy combination of two fellow-students.

Many besides myself will probably remember the opening of that Settlement and the congratulations which we all gave to those two young men who had thus started

their career in a way which gave a foretaste of their future successes.

We then pass on to Cardiff, and I think some recognition should be given to the assessors in that competition; they certainly made no mistake. I share the regret expressed by the reader of the paper, however, that the treatment of the foreground of those magnificent public buildings has been so long neglected. Nothing could be more striking than the aerial photograph which showed the present position and the opportunities for great improvement, and I hope that Mr. Lee, who has come here to testify to the appreciation felt for Smith and Brewer not only by the museum staff but also by the town, will take back some ideas which may possibly help the corporation to commemorate this year of our King's Silver Jubilee by a new lay-out. Those who know those buildings will remember the water which is close at hand, and an opportunity seems to present itself for a beautiful lay-out with a foreground of water which would give reflections of the many delightful scenes in that grouping.

We are immensely indebted to Mr. Fletcher for having brought together such an excellent group of illustrations, and he deserves our very cordial thanks. I have much pleasure in supporting the vote of thanks to him which has been proposed.

Mr. S. K. GREENSLADE [*F.*]: I really had no intention of speaking, but there is one thing that I want to say. I think Mr. Fletcher's paper is magnificent, and it seems to me very doubtful whether it could be bettered in any way whatever.

I was great friends with Mr. Smith and Mr. Cecil Brewer since the early days when I was a resident for some years—I was there before they appeared. I believe the year has been given as 1898, and from that time to the end we were great friends. Nothing could have been better than Mr. Fletcher's discussion of their work and of the part which each one took and of the wonderful friendship which existed between them. Everything was perfect, as I know very well, for I worked for hours and hours with both of them. In my difficulties they helped me, and sometimes I was allowed to help them a little.

Mr. HENRY FLETCHER, in reply, said: I thank you all most heartily, and especially my old friend Greenslade, for the much too flattering way in which you have received this paper. It has given me a very great deal of pleasure to write it and to remind myself again of all the beautiful and admirable buildings that Smith and Brewer produced. I have nothing more to say except this, that I would not have had Brewer one atom more reserved or Smith one atom more expansive than they were. What we loved them for was what they were, not what they might have been.

Dance the Younger and the Architectural Profession

BY RICHARD PENNINGTON

George Dance the younger, famous for old Newgate's grim façade, left no published work under his own name, except a book of portraits. But it now seems possible that we possess his views upon the architectural profession of his day in an anonymous pamphlet entitled *An essay on the qualifications and duties of an architect, etc. With some useful hints for the young architect or surveyor*. The connection of this rather obscure pamphlet with Dance has not, I believe, been noticed previously. It was published in London in 1773, while Newgate was being built, and the immediate reason for its appearance was to defend Dance against a charge of having substituted Purbeck Portland for the usual Portland in the construction of the prison. No author's name is given, and the references are always to "Mr. D.," and the pretence of impartiality (if pretence it is) is well kept up by this witness to Mr. D.'s honesty.

One of the excuses for the surveyor's conduct in having ignorantly admitted the Purbeck Portland is that the qualifications of an architect are so difficult and numerous that there must of necessity be some things he has no time to learn—the nature of different stones, for example—and the writer develops this theory by an exhaustive account of the ideal education of the architect.

Now the details of this training so well agree with what we know of Dance's life that we cannot help suspecting that in sketching the compleat architect Dance, as the concealed author, has indulged in some generalised autobiography. This is the chief reason for the assumption of Dance's authorship.

The author of the pamphlet emphasises the importance to the architect of drawing—Dance was an exceptionally good draughtsman; a foreign tour is considered *de rigueur*—Dance had been fortunate enough to do the Grand Tour some years before; much stress is placed on the duties of a surveyor, and the good surveyor is praised in comparison with the pretentious architect—Dance's father was city surveyor and his son succeeded him in that position. These parallels, combined with the pamphlet's vigorous defence of Dance's conduct, surely point to Dance's authorship.

"The term architect," the pamphlet begins, "is frequently made use of, and misapplied, by some who do not rightly consider its true meaning; as well as often assumed by others, who either ignorantly, or designedly, assume that which is not their right." There speaks the good academician. So the writer proceeds to define architecture and the compleat architect, who ought to be well acquainted with drawing, arithmetic, geometry, designing, optics, perspective, hydraulics and mechanics "and several other sciences." Indeed, he finds so many things necessary to the qualified architect that he comes to the paradoxical conclusion that it is impossible to find anyone entitled to the name.

He sketches the education of an architect: "When an infant, he very early discovers an extraordinary genius for drawing, and particularly for drawing buildings for civil use; his parents place our young gentleman from the time he can speak to the age of about fifteen under the tuition of the most eminent masters," under whom he learns drawing, mathematics, Latin, French and Greek. He is then for a very handsome premium attached to an eminent architect, who later sends him on a tour through France and Italy. Here he studies the ancient work, and when this is done "he turns to the works of the Moderns, examines them carefully, compares them with the ancient works, marks their difference, and improves upon both in his own designs." There is no need to italicise these last delightful words.

In distinguishing between architects and surveyors, he concludes "most of our modern architects are only, strictly and properly speaking, surveyors, and do not come up to the character of an architect." This is probably true, but for the century that saw such buildings as Clare College and Abingdon town hall built by men who certainly were not, strictly and properly speaking, architects, the distinction does not seem of much value.

The pamphlet then digresses into a defence of Dance's use of Purbeck Portland for the new prison; but why exception should have been taken to the use of a Portland stone of such acknowledged quality it is difficult to say.

There are at the end some hints for the young architect, hints given to the novice in every profession in every age, and savouring a little of Polonius's wisdom. "Give not yourself up to fashionable vices of the times"—does he mean Gothic revival, or other things, one wonders; "avoid particularly swearing in common discourse; shun drunkenness and lewd women, for they will infallibly cloud your faculties and make you unfit for business." And above all, never make the largeness of your family a reason for your application for any work. Some of the cautions are a little irksome: "Never court the company of those who are only respected for their money"; and "be not too forward in offering your service. The architect, says an eminent author, should not, when he hears anyone is going to build, run hastily to offer his service: I know not whether he ought not to stay till he be more than once intreated." But the pamphleteer adds consolingly: "This is strange language, I make no doubt, to some of our modern architects, who, not content with one or two places, are for grasping all they can get."

It cannot be said that the evidence, strong as it circumstantially is, is quite strong enough to convince the biographer or bibliographer. But if the pamphlet is not actually written by Dance, it is certainly inspired by him and representative of his views.

[*"Architect and Building News"*]

Birmingham Hospital Centre. Architects: Lanchester and Lodge [FF.]. A modern English version of the so-called "vertical" hospital

MODERN HOSPITAL PLANNING

BY E. STANLEY HALL, M.A., F.R.I.B.A.

A Paper Read Before the Manchester Society of Architects on 13 February 1935

It is only six years since the late Mr. Percy Adams read his excellent paper on this subject at the R.I.B.A.* and I feel that anyone who is keen on hospital planning is bound to have studied that article very carefully. Into it is packed an enormous amount of information, general and detailed, by one who was at the top of his particular tree, and six years is a short time in which any startlingly new developments are likely to appear. However, I will do my best to take his paper as read, and to confine myself to the newer problems.

THE LAY-OUT

A hospital is in reality a young town, made up of many units, each of which may need to expand independently of the rest. In an ordinary general voluntary hospital in a town centre, we may expect to have to cater for the following departments:—

1. *Casualty*. This word is generally, though not always, used to cover all cases which arrive at the hospital for the first time, and not specifically for accident cases. Most accident cases are casualties, but all casualties are not accidents. The casualty department is looked after by a casualty officer, who may be a paid official or a resident surgeon or physician. Here the

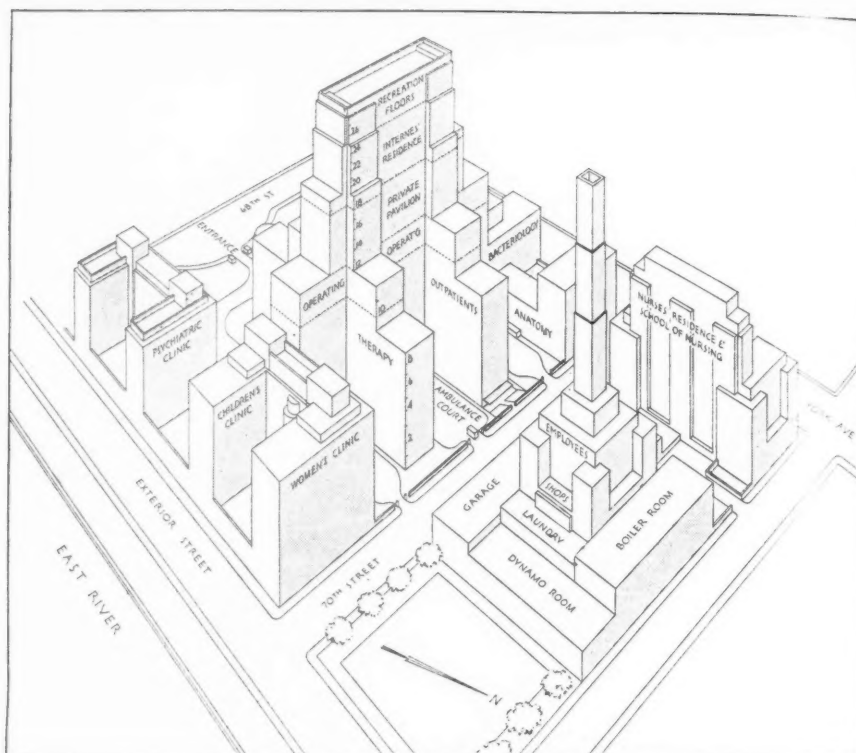
patient is first diagnosed, given his "card" or medical history sheet, and told whom he is to see and when.

2. *Out-Patient Department*. This department deals with all patients who come from outside for expert advice of the leading men of the day. They have already been examined by the assistant officer, and arrive more or less at the appointed time and take their seats within a short distance of the consultant's room. Large numbers are dealt with daily, and the planning of the department is one of the most difficult of all hospital problems. It contains numerous types of Consulting Rooms: Surgical, Medical, X-Ray, Ear, Nose and Throat, Ophthalmic, Dental, Gynaecological, Orthopaedic, Electrical Therapy, Baths, Dermatology, Urology and sometimes Radium Treatment, Deafness (which, strangely enough, needs a soundproof room, owing to the delicacy of the instruments used), Cardiograph Rooms, Laboratories for Blood Tests, etc.

3. *Ward Units*, which form the In-Patient Department proper. There are many sub- and cross-divisions—Men's Wards, Women's and Children's, Surgical, Medical, Gynaecological, Special, Septic, public or private.

4. *Operating Theatres*, both for in-patients and out-patients grouped sometimes horizontally, as at Leeds, sometimes vertically, as at St. Bartholomew's.

* *English Hospital Planning*, by Percy Adams. R.I.B.A. JOURNAL. Vol. 36. Nos. 15 and 16. June 1929.



New York Hospital. Architects: Coolidge, Shepley, Bullfinch and Abbott. A typical American large "vertical" hospital. Isometric drawing looking from the north-east

5. *Pathological Block* with Laboratory, P.M. Room, Mortuary and Chapel.

6. *Administration Block*, generally containing Secretary's Department, Matron's Department, Almoners' Department, Appeals Department, Stewards' Department, with Engineering and Carpenters' Shops and Stores, etc., R.M.O.'s Quarters and Matron's Flat.

7. *Staff House for Sisters, Nurses and Maids*, with Preliminary Training School for Probationers.

8. *Teaching Block for Students*, with Laboratory Lecture Rooms, Museum, Class Rooms, etc., often requiring 40,000 square feet of floor space.

9. *Boiler House, Electrical Generating Plant, etc.*

10. *Laundry and Disinfector and Destructor.*

11. *Ambulance and Car Garage.*

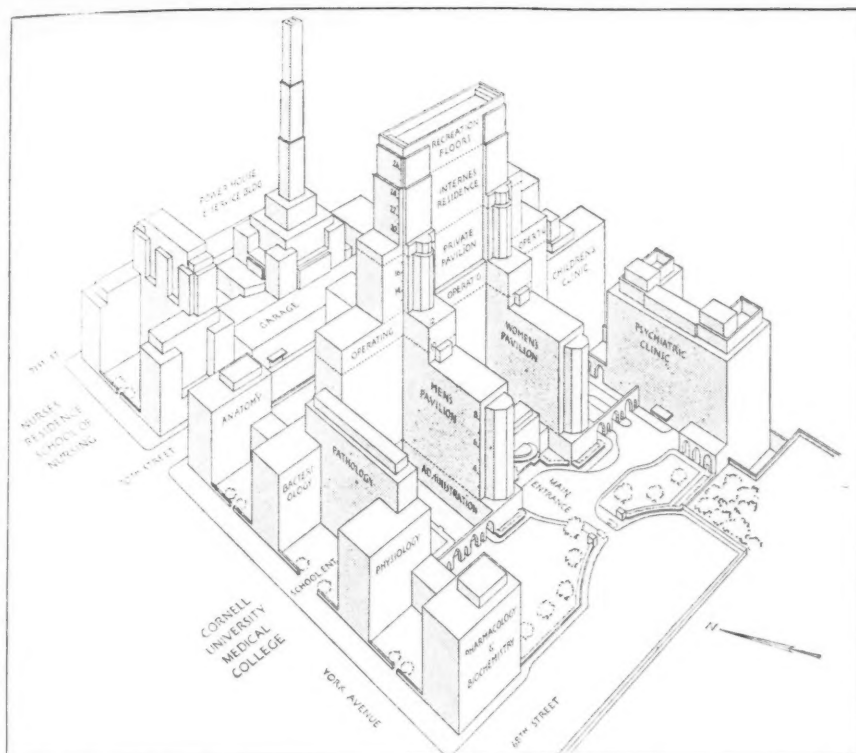
12. *Porters' Lodge and Male Staff Quarters.*

No amount of trouble is too great in the early stages in order to ensure that all these departments shall be placed in proper relation to each other, with sufficient elbow room to expand to meet possible future requirements. A bad lay-out will never make a good hospital, and if, as so often happens, the governors wish to start on a part of a larger scheme, the architect should insist on knowing the utmost possible extent of future pro-

posals before ever a brick is laid. One has seen so many additions made with no thought for future developments: the immediate scheme is put up, and is a dog in the manger until someone has the courage to scrap it.

In hospital lay-outs, there are the rival schools of vertical and horizontal planning, the former prevailing in America and the latter in England. Vertical planning, as I understand it, denotes a composite block in which different units of the hospital are on different floors, and in which the architectural composition of the block determines to some extent the area and the arrangement of the units. Horizontal planning denotes a series of blocks each for particular kind of unit. Some of the blocks may go up the maximum height allowed, but each block is planned for its own special purpose, and does not have to conform to the needs of the unit below or above.

I cannot help feeling that the latter arrangement is always preferable if space permits. In the vertical type the exigencies of certain units must cramp the development of the requirements of others. In America, sanitation on inner walls and corridors, with wards on both sides are common. In England we like windows that open to the fresh air as much as possible, and prefer daylight to electric light. Vertical planning may be the



New York Hospital from the south-west. The building has 27 floors and a tennis court on the highest roof. The drawings are from the "Architectural Forum" of February 1933

solution in crowded and expensive sites; but I do hope that if ever it is adopted in this country, we shall remember to maintain as good angles of lights to all patients' rooms as we should on the horizontal planning system. Given adequate light and air, I see no objection whatever to high buildings. At the new Children's Hospital, the Nurses' Home rises to 87 feet above the pavement, and the Ward Blocks will be a little higher still. In cities, the higher you go the purer the air; and therefore it is a definite advantage to build high blocks if the angles of light and the circulation of air are maintained.

In siting hospital buildings, we all know that sunshine and a south aspect are of great healing value. I will not labour this point, except to throw out a reminder that a hospital starts its in-patients' day fairly early—say, at 6 a.m., and finishes somewhere about 7 p.m.; for this reason I think east more valuable than west, more particularly since a slanting west sun is liable to keep patients awake. Movement of air is almost as important a factor as sunlight. Movement of air does not mean draughts. Draughts, I take it, are isolated rushes of cold air in an otherwise warm room. These must be avoided, and have been the cause of putting an end to cut-off lobbies separating sanitary towers from the wards. Theoretically they served as a cut-off cross ventilation

between the ward and the sanitary annexe; actually, they caused a chill draught to the patient passing from the ward to the annexe, and the windows were consequently kept shut.

Movement of air has had a great boost since the war. The effect on hospitals has been mainly twofold—the provision of open balconies for patients and the designing of new types of windows with 100 per cent. opening capacity. I have never liked sash windows. They



A window at Maidenhead Hospital, illustrating the author's recommended subdivision into various types of opening. Architects: Stanley Hall & Easton and Robertson [FF.]



have sash boxes where germs may breed, and cords or even metal chains may break; and at the best they give only 50 per cent. of opening and cannot be opened at all if facing a wind when it is raining. I do not like the louvred Austral type, because even when fully open, they intercept the sun's rays, since all ordinary glass is impermeable to ultra-violet rays. I think the ideal window is one in which the upper fourth is horizontally centre hung, the bottom fourth is bottom hung to open inwards, and the centre half is side hung to open outwards. Every part of the window can be cleaned from the inside, 50 per cent. can be opened even when wind and rain are driving against it; and in fine weather, the unobstructed ultra-violet rays can be let in through one half of the window area (page 651).

I have mentioned the passing of the cut-off lobby. With that has gone the flanking sanitary tower which so long blocked the S.E. and S.W. angles of the south end of the wards. Sanitary towers should not be smelly places, and indeed no longer are. The bed-pan is offensive during its

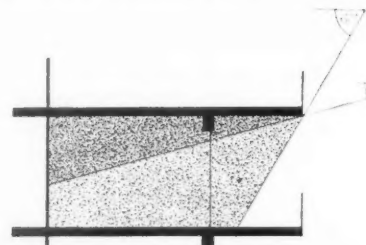


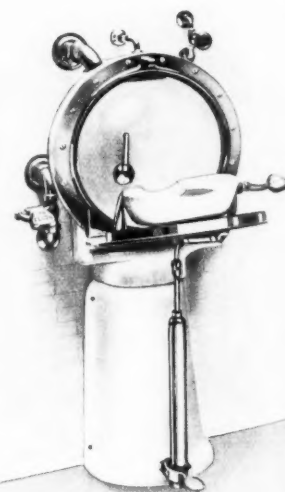
Diagram illustrating the author's remarks on balconies and the insulation of wards. From balcony and wards on left below

passage to the sink room, and the journey should be made as short as possible from the farthest bed. A great improvement has been made recently in the type of bed-pan washer. Up to a few years ago it was an open slop sink with an upcast jet at the bottom. The latest pattern, copied from America and made by Dent and Hellyer and others, is a closed-in compartment, something like the old tip-up cabin basin (illustration below). It is expensive, but very much worth the money from the nurse's point of view. It is claimed that in it the bed-pan can also be sterilised by the introduction of a steam jet, but this is very unpractical as sterilisation takes 20 minutes, during which time the bed-pan washer cannot be used. Sterilisation should be done in separate apparatus.

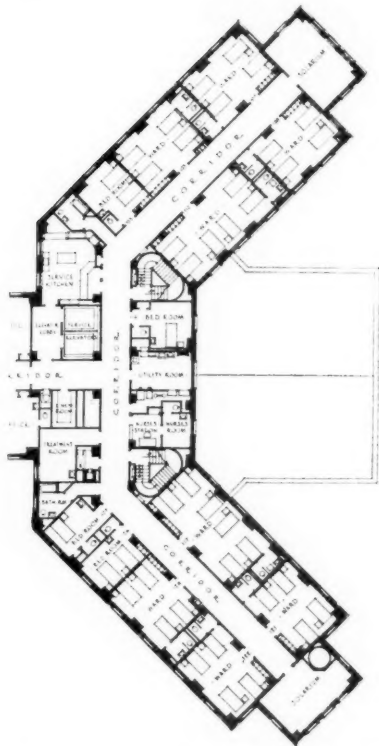
The disappearance of the sanitary annexe from the south end of the wards has made wide south balconies possible, and has given a great sense of openness to the plan generally. Balconies have been criticised because it is said that they keep out the sunshine. I believe the criticism is quite unjustifiable, more particularly in the pavilion type of ward with windows on three sides. One must remember that in winter the sun never rises above

Top left: Sun balconies at the end of a ward block. *The Royal Masonic Hospital.* Architects: Sir John Burnet, Tait and Lorne [FF.]

Left: Sun balconies in front of wards. *Queen Charlotte's Hospital, Isolation Block.* Architects: Stanley Hall & Easton and Robertson [FF.]



Right: A modern type bed-pan washer



Typical American ward block planning, showing internal sanitation

15° from the horizon. In midsummer when it rises to 60°, balconies are useful as sun blinds without impeding the air in the slightest. In the Infants' Hospital and Queen Charlotte's Hospital Isolation Block with wards only 9 feet high, there are balconies projecting 7 feet 6 inches, and there is no feeling whatever of their overshadowing the wards (page 652).

Here it may be said that even north balconies are extremely useful. In the summer the sun gets on to the north side at 3.30 p.m., and there is as much benefit from ultra-violet ray in an unobstructed north aspect as in any other.* Often in hot weather, particularly for children and babies, it is better to be in the shade than in the hot sun.

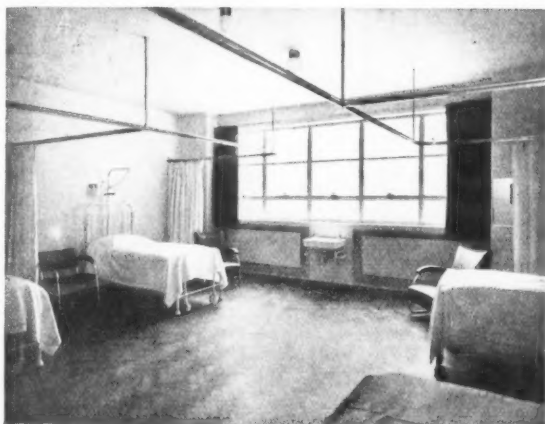
WARDS

I have spoken of the effect of fresh air on the planning of wards. There are two other tendencies which may radically affect their planning. One is that large wards of 30 beds or more are being replaced by smaller, with other wards of four beds, or two or even one in the same nursing unit; 30 beds are generally considered the largest unit capable of being treated under the care of one sister.

* See R.I.B.A. Orientation of Buildings Report.

† See Hertford County Hospital Extensions. R.I.B.A. JOURNAL, 2 June 1934.

To place these 30 beds in one large ward is easy, but it is much more complicated if this number has to be split up in small wards. One solution which gives partial segregation is the now well-known parallel bed arrangement instead of the old toe-to-toe arrangement; I think it is a very marked improvement and infinitely more comfortable for the patient.† Very sick patients can so easily be screened off, and when they have visitors, any patient can enjoy more privacy than in the absolutely open ward. In the Children's Hospital, where the spread of infection is a particular and real danger, the nursing units are to be sub-divided into two completely independent half-units. Then, if measles breaks out in one half, only that half need be segregated. At the Royal Masonic Hospital, there are no wards with more than four beds, except the children's wards which were designed for eight. This makes the pavilion type of plan impossible, and if, as I expect, wards will tend to become smaller, the pavilion type will disappear, and wards



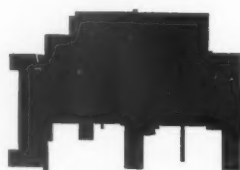
Modern ward planning. Above: Brentwood Hospital. Architect: Hugo R. Bird [F.]. Below: The Royal Masonic Hospital. Architects: Sir John Burnet, Tait and Lorne [FF.]

LOS ANGELES COUNTY GENERAL HOSPITAL

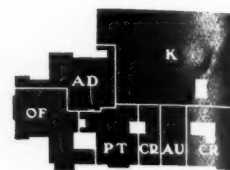
KEY PLANS

BUILDING DIVISION DESIGNATIONS

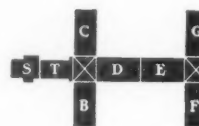
A—West Wing	H—Wing over S & T
AD—Admission	K—Kitchen
AU—Auditorium	L—Orthopedic
B—Typical Ward	M—Morgue
C—Typical Ward	OF—Office
CR—Class Room	P—Pathological
D—Typical Ward	PT—Physio Therapy
E—Typical Ward	S—Infected Surgery
F—Typical Ward	T—Examination & Treatment
G—Typical Ward	X—X-ray



1ST GROUND FLOOR



2ND GROUND FLOOR



8TH FLOOR



9TH, 10TH FLOORS

Key plans of a recently completed multi-floor American hospital

will be continuous on one side of a well-lighted and ventilated corridor, with the ancillary rooms on the other. In maternity hospitals, small lying-in ward units of six beds are required. These cannot be planned with windows on both sides, except at very great expense: but there should always be cross ventilation to a well-ventilated corridor.

PAY BLOCKS

The other factor that is likely to affect the planning of wards is the increased desire for private and semi-private beds for paying patients. Now that the old Poor Law hospitals have become municipal and deal with the necessitous sick poor, it is left to the Voluntary Hospitals to deal with people who, though not well-to-do, can afford to pay something for hospital treatment. This is done by the provision of a Private Pay Block, which is often a difficult unit to plan. Sometimes it is required that the block shall be entirely self-contained, with its own kitchens, operating theatre, etc., sometimes it is served from the diet kitchen. Separate kitchens, of course, mean the expense of a separate chef. Special theatres also for the private block are an additional expense. If there are no such theatres, the private block must be within comfortable reach of the hospital theatre and X-ray department.

As to the size of wards, there is a diversity of opinion on the matter of single or multiple bed wards. Many hospitals have a contributory scheme running, and in return place private wards at the disposal of contributors at a fairly low weekly charge. At such charges it is not economical to have single wards, which naturally take more nursing and cost more to run. The planning of these units must be very elastic, as the rooms may be occupied at different times by a different ratio of men to women. I think a good principle to follow is to have

sanitary conveniences at the extreme ends of each floor of private wards with access at either end, so that either sex may expand from one floor to another as occasion demands.

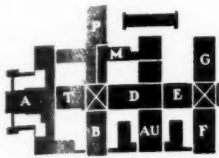
In addition to the ancillary rooms usually required for ward units, the following rooms are required for such private blocks: a porter's room for receiving parcels, flowers, etc., for the patients, a flower pantry, a visitors' waiting room preferably on each floor, and a consultation room where the doctor can interview the relatives of the sick. Sometimes it is necessary to provide a room where relatives may stay all night in urgent cases. Private wards should have a separate entrance if possible.

OUT PATIENTS

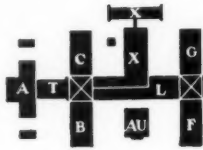
The Out Patient Section is a very difficult problem, because so many patients are seen in such a very short space of time. Everything in reason must be done to facilitate the handling of patients with the least possible waste of time—theirs or that of the honorary and permanent staff. The accepted plan for this unit has been for many years a large central waiting hall with the various



Leeds Hospital. Architects: Stanley Hall & Easton and Robertson [FF.]. A recent scheme showing paying patients' ward unit planned with a central corridor. Reference: 1, 1-Bed Ward; 2, 4-Bed Ward; 3, 6-Bed Ward; 4, Bath; 5, Sink Room; 6, Nurses' Station; 7, H.M.C.; 8, Ward Kitchen; 9, Consulting Room; 10, Sister



3RD GROUND FLOOR



1ST FLOOR



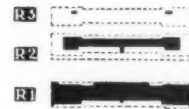
2ND FLOOR

3RD, 4TH, 5TH, 6TH
(MATERNITY), 7TH

11TH FLOOR



12TH FLOOR

13. SURGICAL OPERATING
14. MUSEUM
15. EMERGENCY ISOLATION
16. PIPE GALLERY

1ST, 2ND, 3RD ROOF PLANS

Designed by the Allied Architects' Association of Los Angeles. Drawings from the "Architectural Forum"

Below on right: A recent Out Patients' Department at Leeds Hospital.
Architects: Stanley Hall & Easton and Robertson [FF.]

REFERENCE:

3RD FLOOR (RADIUM AND SKIN DEPT.)

1. Almoner.
2. Almoner's Clerks.
3. Preliminary Waiting Room.
4. Women's Lavatory.
5. Men's Lavatory.
6. Sister.
7. Consulting Room.
8. Treatment.
9. Baths.
10. Undressing.
11. House Physician and M.O. in charge of radium.
12. Radium Work and Treatment.
13. Radium Office.
14. Mercury Vapour.
15. Carbon Arc.
16. Kromayer.
17. Sink Room.
18. Men's Recovery.
19. Women's Recovery.
20. M.O.'s Retiring Room.
21. X-Ray.

2ND FLOOR (SURGICAL O.P. DEPT.)

1. Almoner.
2. Almoner's Clerks.
3. Preliminary Waiting Room.
4. Women's Lavatory.
5. Men's Lavatory.
6. Consulting Room.
7. Undressing.
8. Examination Cubicles.
9. Local Waiting Room.
10. Plaster Room.
11. Radioscopy.
12. Operating Theatre.
13. Sterilising Room.
14. Wash Up.
15. Surgeon's Retiring Room.

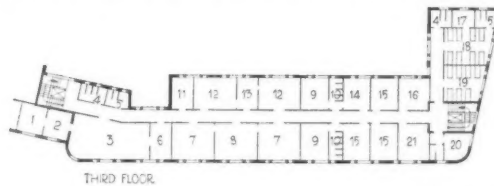
1ST FLOOR (MEDICAL O.P. DEPT.)

1. Almoner.
2. Almoner's Clerks.
3. Preliminary Waiting Room.
4. Women's Lavatory.
5. Men's Lavatory.
6. R.M.O. Examination Room.
7. Examination Cubicles.
8. Consulting Room.
9. Local Waiting Room.
10. X-Ray Screening.
11. Laboratory.
12. Electro Cardiograph.
13. Examination Room.
14. M.O.'s Lavatory.
15. Office.
16. Store.
17. Dispensary.
18. Dispensary Waiting Room.
19. Dressings.

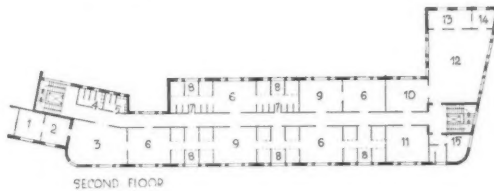
GROUND FLOOR.

1. O.P. Vestibule.
2. Record Office.
3. O.P. Waiting Hall.
4. Buffet.
5. Almoner.
6. Chiropody Waiting.
7. Chiropody.
8. Sister.

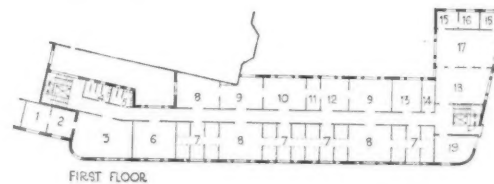
consulting rooms opening out. The hall is twice the height of the consulting rooms and has clerestory lights or skylights, or both. This hall is expensive to build, to decorate and to heat; and the large numbers there tend to cause noise and risk of infection. The patients are roughly classified to sit near the consulting rooms to



THIRD FLOOR



SECOND FLOOR



FIRST FLOOR

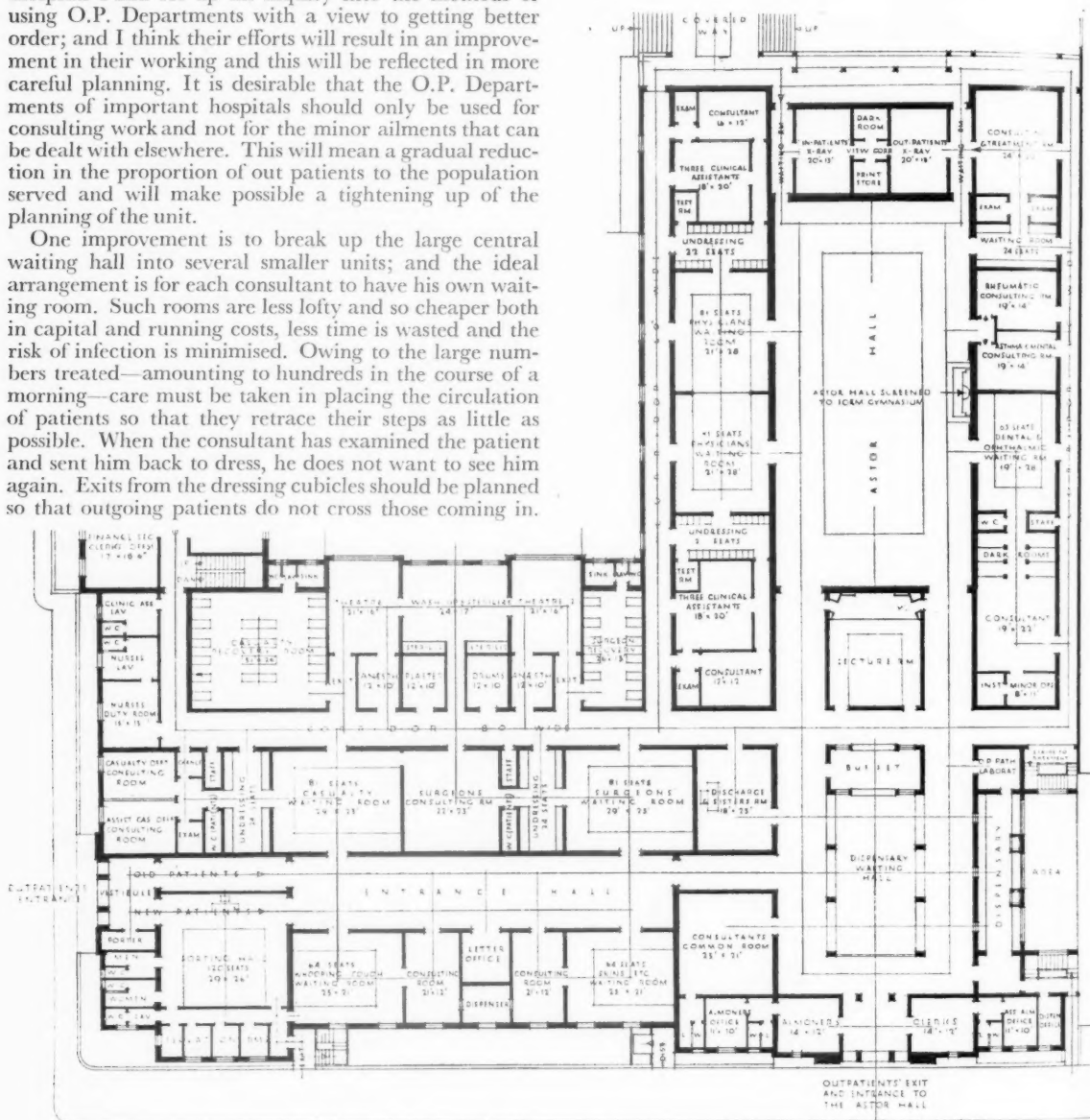


GROUND FLOOR

which they are allocated. This rough and ready plan was suited to the somewhat haphazard method of using O.P. Departments. But in 1932 the King Edward VII Hospital Fund set up an inquiry into the methods of using O.P. Departments with a view to getting better order; and I think their efforts will result in an improvement in their working and this will be reflected in more careful planning. It is desirable that the O.P. Departments of important hospitals should only be used for consulting work and not for the minor ailments that can be dealt with elsewhere. This will mean a gradual reduction in the proportion of out patients to the population served and will make possible a tightening up of the planning of the unit.

One improvement is to break up the large central waiting hall into several smaller units; and the ideal arrangement is for each consultant to have his own waiting room. Such rooms are less lofty and so cheaper both in capital and running costs, less time is wasted and the risk of infection is minimised. Owing to the large numbers treated—amounting to hundreds in the course of a morning—care must be taken in placing the circulation of patients so that they retrace their steps as little as possible. When the consultant has examined the patient and sent him back to dress, he does not want to see him again. Exits from the dressing cubicles should be planned so that outgoing patients do not cross those coming in.

This idea of return corridors is, of course, expensive and can only be justified if the work done at the hospital can warrant it.



C R E A T O R M O N D S T R E E T

A scheme (now revised) for the Out Patients' Department at the Children's Hospital. Architects: Stanley Hall & Easton and Robertson [FF.]. This illustrates the elaborate type of Out Patients' Department with central hall and exit circulations which is tending to be superseded by a more simple arrangement, such as that at Leeds, illustrated on the previous page

On the whole I think that O.P. Departments have been tending to become too extravagant. The programme of hours should be arranged so that different consultants can occupy the same suite of rooms at different times. It is waste of money to build consulting rooms to be occupied only a few hours each week. It must be remembered that every consultant thinks that his own department is the most important and the architect must get the help of a small building committee to decide on the relative merits of each.

In planning a new O.P. Department I think that plenty of room should be allowed for electrical treatment and massage: this branch is certain to grow, and the area required is often from one-quarter to one-half the size of the rest of the whole department. The treatment of skin diseases and of X-ray work requires a very considerable space. Radium treatment is still in its infancy and is limited only to certain hospitals.

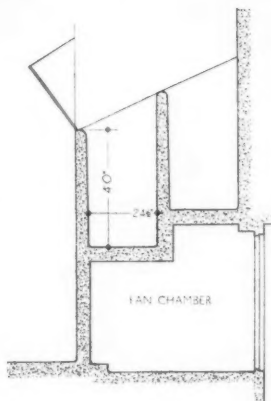
I have said before that a good O.P. Department is one of the most difficult blocks to plan. Mr. Percy Adams gave in his paper the general requirements: but I have found that each hospital seems to have its own way of using this department and its own particular needs; and the only hope for the architect is to get all the help he possibly can from the staff who are likely to run the department when completed before he makes his final plan.

THE THEATRE SUITE

In Mr. Adams's paper, the normal requirements are given in considerable detail.

One of the complications of theatre planning is the provision for students. Sometimes, as at Leeds, they are admitted to the floor of the theatre; this arrangement needs no special planning, but only an increase in the floor area, and, of course, a students' changing room where they put on overalls and masks, etc. This must be the best arrangement for the student, but I can imagine them getting rather badly in the way of the surgeon and nurses.

A very usual plan is to have a gallery across the north wall, raised a foot or so above the floor; this is the arrangement at the West London Hospital and is planned for the new theatre of the Children's Hospital. In both these cases there are twin theatres with a common sterilising and wash-up room between them: and the students' gallery has to be planned with separate entrance and exit and connecting corridor from one theatre gallery to the



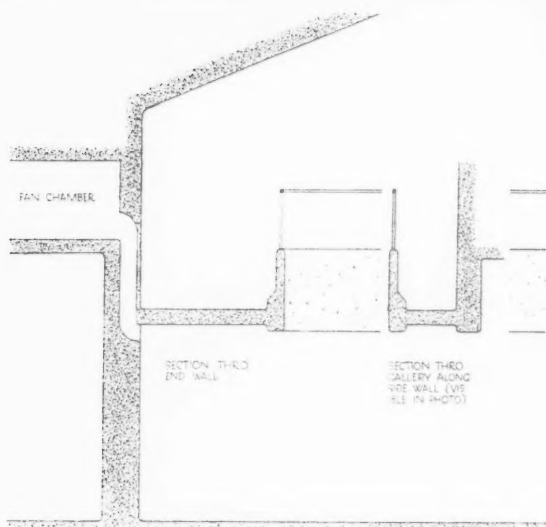
*Typical operating theatre at St. Bartholomew's Hospital, London. Architects: Lanchester and Lodge [FF].
A detail of the students' gallery, which has a plate-glass screen, is on the left*



other. At Barts, where the theatres are vertically planned, the students are in a gallery with two or three tiers of seats on one side of the theatre, with a plate-glass screen between them and the theatre. The objection to this is that it would be difficult to hear anything said by the surgeon, and the plate glass is apt to get steamy if they breathe on it. At St. Mary's, Paddington, we have shallow galleries on three sides of the theatre just above door height and only one man deep. I really think they have the best chance of seeing what is going on. For purely teaching purposes the Scialyscope solves the problem by projecting the whole process of the operation magnified three times on to a screen in the adjoining room (page 659). It has the objection of bulking very large in the theatre itself, and of costing four figures to install.

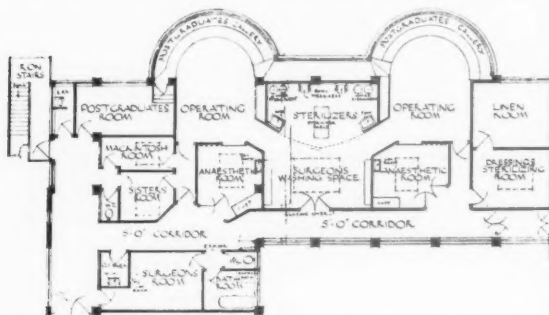
In the sterilising room there are two types of built-in sterilisers. The first follows the design of Schaerer of Berne, whose sterilisers are used at the London Clinic; those at the Royal Masonic Hospital by Manlove, Allott are of the same type of lay-out. They look like a recessed kitchen range and sterilisation is obtained by boiling. The other type consists of autoclaves built into the wall where sterilisation is done by steam. Both depend for proper working on adequate access for the fitters to all the multitudinous supply pipes that are concealed. Access to these cupboards should be external to the theatre altogether. Normally each theatre has its own instruments and gloves steriliser, bowls steriliser and hot and cold water sterilisers. Dressings are generally sterilised in bulk for the requirements of the whole hospital and need not be necessarily near the theatre. The dressings are sent in drums, which can be made airtight, to wherever they are wanted.

Built-in viewing boxes are required in theatres to hold two X-ray photographs at a time. Provision must also be made for lotions and clean and empty drums, for the removal of soiled overalls, swabs, etc.

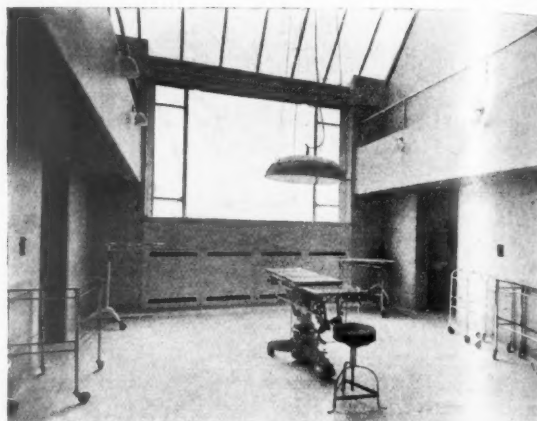


For the heating of theatres, I believe that conditioned air heating is the best, provided that the conditioning plant can be placed immediately outside the theatre and that an inflow duct is of the shortest possible run. If these ducts are more than only 2 or 3 feet long they are dust traps and the dust is blown into the theatre. But if they are no more than a few feet long the hot air can be introduced high up and the foul air extracted about 5 feet above the floor. In this way the deposit of dirt by convection currents on the ceiling is reduced to a minimum. With any form of radiator or convection heating the ceilings will get dirty within a very few weeks of the theatre being open; and this happens all the more quickly because theatres have to be kept at a temperature of 80° Fahr.

For theatre lighting a central prism light like that made by the G.E.C., Zeiss or the Scialitque Lamp Co. is generally adopted. This can hang from a fixed point or from rails on which it can be moved to one end or



The plan and photograph show the method of accommodating students in the operating theatres of the West London Hospital. Architect: A. Alban H. Scott [F.] The galleries are approached from a separate room



The operating theatre at St. Mary's Hospital. Architects: Stanley Hall & Easton and Robertson [FF.]. The students' balcony is on three sides; a detail is on the left

other of the length of the table. Some surgeons, however, dislike it and prefer four or more lights concentrated on the table. (For illustration see page 660).

With a good sterilising wash-up room adjoining the theatre there is no need for any basins in the theatre itself. There should also be provided a dirty wash-up room where soiled instruments are washed before being sterilised and where remains of the operation are disposed of or cut up into microscopic sections; this room should be quite separate from the main sterilising and wash-up room.

THE KITCHENS

Hospital kitchens differ from hotel kitchens principally in the fact that half the diners have to have the



food sent to them instead of coming to central dining rooms. Electrically heated trolleys and vacuum trolleys made on the principle of a thermos flask prevent the food from being spoilt on its way, but obviously a central position for the kitchen block is the best. Ideally I think it should be in a single-storey building at ground level. Here the food must be delivered by tradesmen and as much of it is eaten at ground level needless journeys are saved. Even in compact sites where room cannot be spared for a single-storey building one must remember that in built-up areas the purest air is at the top and should therefore be reserved for patients who spend 24 hours of the day in their wards rather than for



The students' galleries in the operating theatre at Los Angeles Hospital, by the Allied Architects' Association of Los Angeles. This large hospital has just been finished, and is illustrated in the "Architectural Forum" of March 1935

kitchens and dining rooms which are only occupied for a few hours a day.

Dining rooms for the staff should be as near as possible to the kitchens for obvious reasons; the hospital cannot afford the luxury of more than one kitchen, which means more than one head cook. A separate kitchen, therefore, is seldom provided for the staff home,

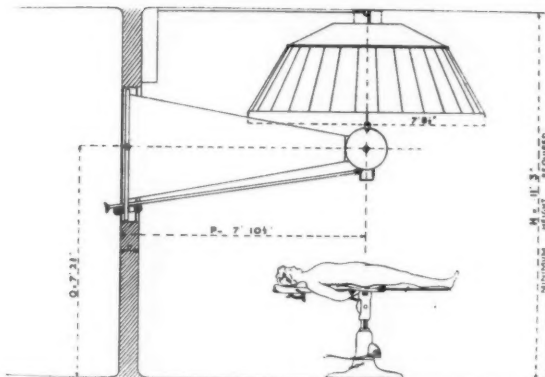
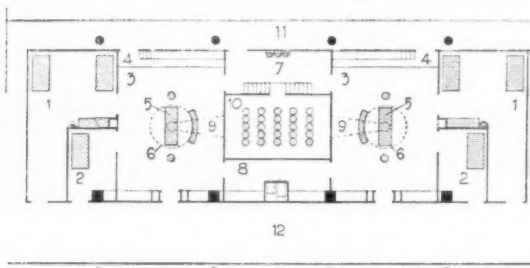


Diagram showing the working of the Scialyscope, which projects an enlarged view of the operation on a screen in an adjoining apartment

and nurses' dining rooms are often in the hospital quarters near their work rather than in their home. If Pay Blocks are required to be totally separate they must have a separate kitchen, otherwise the cooking is done in the main kitchen or in the diet kitchen adjoining. Very careful planning is required in this department and a right arrangement of circulation: inward food to stores; from stores to preparation rooms and thence to the cooking plant; to the servery and to the various destinations; dirty dishes, pots and pans and cutlery to their washing places without crossing the circulation.

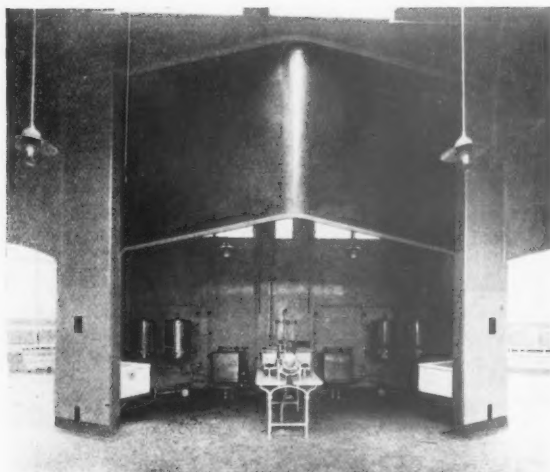
There are numerous semi-automatic articles of labour-saving equipment, dish washers, potato peelers, pudding mixers, silver burnishers, refrigerators, etc. With such and with careful planning, considerable economy of space can be obtained. Kosher kitchens for Jewish patients are sometimes required and milk laboratories and bottle sterilising rooms for children.



Project for Lille Hospital, by Paul Nelson, showing viewing room with two Scialyscope screens between a pair of operating theatres.

Reference:

1, Recovery Room; 2, Anæsthetic Room; 3, Operating Theatre; 4, Students; 5, Operating Table; 6, Lamp; 7, Surgeon's Scrub Up; 8, Sterilising; 9, Scialyscope; 10, Scialyscope Room; 11, Mezzanine Corridor for Students (Windows to Operating Theatres over); 12, Corridor



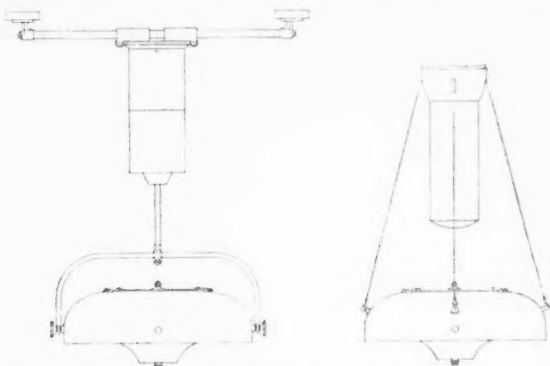
Sterilisers at the West London Hospital. See plan on page 658

ADMINISTRATION

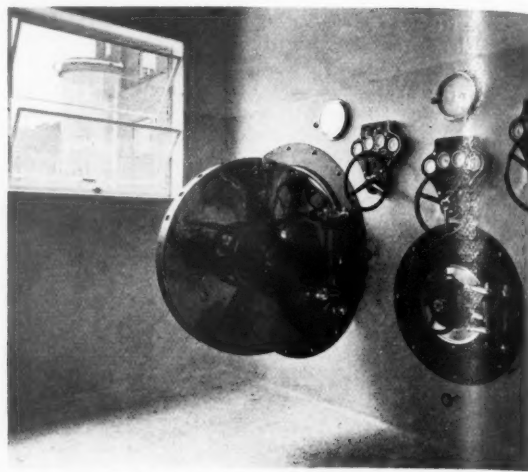
This is a fairly straightforward unit. It is only necessary to mention here that space must be allowed, *inter alia*, for the appeal department, in which several clerks and an important appeal secretary work, and for the almoner whose functions are increasing in scope and importance. Much of her work is in the Out Patient Department, where she must be in close touch with the records office. Not only does she enquire into necessitous cases with a view to aid, but also she finds out where patients can and should afford to pay something for their treatment. She also has after-care duties. She requires a room for typists, one for herself and two or three rooms where she and her assistants can interview patients simultaneously. None of the rooms need be very large.

STAFF HOMES

All modern hospitals of any size have separate Staff Homes. It is only right that the nursing staff

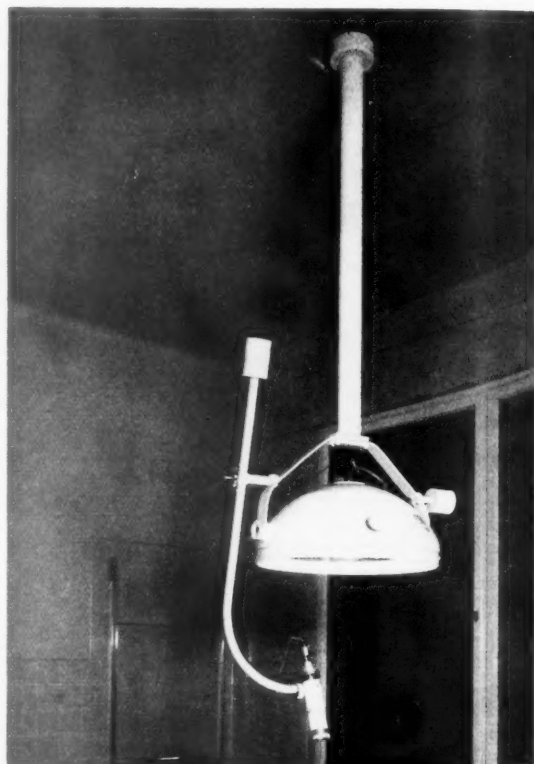


The G.E.C. operating theatre lamp. Two kinds of suspension are shown



Sterilisers at the Royal Masonic Hospital

should be able to get right away from the hospital atmosphere when their arduous day's work is done.



The Zeiss operating theatre lamp

Invariably they should each have a separate bedroom. As to size 12 feet by 10 feet is ideal, 10 feet by 10 feet is quite usual and 10 feet by 8 feet, exclusive of built-in furniture, is being aimed at by L.C.C. and Government Departments. If nurses study in their bedrooms, I think 10 feet by 10 feet should be the minimum. Each bedroom should have a fitted basin with hot and cold water, a small heated towel rail and a built-in wardrobe with hanging space, some long drawers for all their starched clothes, a boot cupboard and smaller drawer for collars, etc. There should also be a small bookcase, a table, a comfortable arm-chair, two other chairs and a bed.

I have tried a good many types of bedroom. A zig-zag partition between adjoining bedrooms with wardrobes recessed side by side is favoured by some, but I think this tends to narrow the room unduly and that the best position for the wardrobe is on the inner wall facing the window. The basin will be on one side of the window with a mirror alongside.* It is interesting to note that the tallest person can get a full length view in a mirror 3 feet 4 inches by 10 inches wide which costs 10s. 6d. Fixed shelves for brushes, bottles, etc., should be placed near the basin and mirror, but preferably not above the basin; the window should be left free for a writing table. If beds are placed along one wall it is a good thing to have plywood panelling along the length of the bed. It saves the plaster walls from being marked. Baths and w.c.'s should be in the proportion of 1 to 5, or at least 1 to 7. One shampoo room and one personal laundry to 50 nurses should also be provided.

Sisters should have bed-sitting rooms. Sometimes the basins are enclosed in cupboards. At the Children's Hospital the bed-sitting room contains only a divan bed and bookcase. The wardrobe, chest of drawers, basin and mirror are all in an adjoining slip of a dressing room. Two sisters' rooms occupy the space of three nurses' rooms.

Different hospitals have different views as to the nurses' common room. At Leeds each "year" have their own common room with one large recreation room for parties. Other hospitals have one large common

room for all nurses and a smaller common room for sisters. At the Manchester Royal Infirmary I have greatly admired the new Nurses' Home by Thomas Worthington and Sons, and I tried to live up to it in designing the Nurses' House at the Children's Hospital. Here we have a single common room for all nurses with a dining room separated by large folding doors. By this means we can get a room 128 feet long. This will be the for-gathering place for all large hospital functions which have hitherto been held in the O.P. Hall. The sisters' common room is a more informal room and can well be planned on the sisters' bedroom floor. A tea kitchen is also required on this floor, as on certain days sisters are allowed to stay in bed for breakfast. Sun-bathing roofs and balconies to sleep on are greatly appreciated. Swimming baths are built at Bart's and St. Mary's, but I think these are extravagancies like billiard rooms in small houses. They are very costly and are patronised by no great number, chiefly no doubt because they have so little time in which to use them.



The Kitchen at the Royal Masonic Hospital

BIBLIOGRAPHY

The list on page 662 gives the principal books, pamphlets, and periodical articles on hospital design in the R.I.B.A. library. Prices are given where they are known. The prices of foreign books, where given in English currency, are those paid by the R.I.B.A. at the time of purchase. In most cases it is probable that they will have risen since then.

Books in the R.I.B.A. loan library are marked with an asterisk. Since at the most there are only two copies available for loan it is impossible to guarantee that they will always be available on application.

* See Hospital for Sick Children, the Nurses' House, R.I.B.A. JOURNAL, 11 August 1934.

Periodical references have not been given to illustrations and descriptions of individual buildings, but a list can be obtained from the library.

Special attention should be paid to the memoranda issued by the Central Bureau of Hospital Information (12 Grosvenor Crescent, London, S.W.) which contain much valuable information on hospital equipment. Lists of the memoranda can be obtained from the Secretary of the Bureau. Readers are also reminded that the Building Centre, 158 New Bond Street, always has on view many of the best and latest items of hospital equipment and building materials, and is able to give expert advice on their use and application.

GENERAL HOSPITALS AND SANATORIA AND HOSPITAL DESIGN AND EQUIPMENT GENERALLY

BOOKS AND PAMPHLETS

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SPECIAL TYPES OF HOSPITALS

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Book Reviews

THE STANDARD METHOD OF MEASUREMENT OF BUILDING WORKS

THE STANDARD METHOD OF MEASUREMENT OF BUILDING WORKS, agreed by the Chartered Surveyors' Institution, the National Federation Building Trades Employers, and approved by the Institute of Builders. London: the C.S.I. 1935. 75. 6d.

The Joint Committee responsible for the production of the *Standard Method of Measurement of Building Works* announce that the third edition was published on Friday, 29 March.

In order to enable members of the profession and of the industry to assimilate the changes from the earlier editions, the official date of issue will be September 1935.

This third edition incorporates extensive revisions which have resulted from over two years of deliberation by the Joint Committee; and as an indication of the thorough manner in which their work has been carried out, it may be mentioned that upwards of 2,000 suggestions for revision have been investigated which were submitted by surveyors, contractors, sub-contractors, and others.

The extensive revisions incorporated in the third edition have been rendered necessary, not only by new methods of construction and the growth of mechanisation in the industry, but more particularly by the fact that the standard method of measurement is now for the first time generally incorporated in the legal documents which comprise building contracts. Clause 11 of the *Standard Form of Building Contract* (published by the Royal Institute of British Architects in 1931 as the result of agreement between that body and the National Federation of Builders) provides that bills of quantities, "unless otherwise stated, shall be deemed to have been prepared in accordance with the *Standard Method of Measurement of Building Works* last before issued by the Chartered Surveyors' Institution." Thus, instead of being merely a guide to the best practice, the *Standard Method of Measurement* has become an authority to be quoted if need be in the courts of law. The Joint Committee have been fully alive to the change which has thus been necessitated in the character of this work.

So completely does the third edition differ from the two earlier editions that these may now be regarded as obsolete, and it will be necessary for all surveyors, builders, and others who use this work of reference (that is to say, all who are actively interested in building contract works), to replace their present edition by a copy of the one just published.

The Committee responsible for the work was comprised as follows: Representing the Chartered Surveyors' Institution: Messrs. Percival F. Gleed, Chairman; A. G. Cross, R. H. Francis, S. L. Porter, Henry Vale, and Edward C. Harris, Hon. Sec.

Representing the National Federation of Building Trades Employers: Messrs. Frank Woods (Bolton, Lancashire), Vice-Chairman, Raymond Bennett (Ipswich), G. Elvins (Birmingham), and William Lacey (London).

Representing the Institute of Builders: Mr. R. L. Roberts (London).

Honorary Editor to the Joint Committee: Mr. Richard W. Gleed.

The book is printed on good quality paper, and, following the practise of the earlier editions, is printed on one side of the paper only. This provides space for the practise notes of the users of the document. It is bound in cloth, and published at 7s. 6d. per copy net, post free. The price having been reduced the practise of issuing copies at half-price to Students and Members will be discontinued. Copies are available by application to the Secretary of the Surveyors' Institution at 12 Great George Street, Westminster, S.W.1, and an order form is enclosed with this issue of the JOURNAL.

FARMS

FARM BUILDINGS. NEW AND ADAPTED. By Edwin Gunn. Sarbiton, 1935. H. C. Long. 5s.

It is curious to think that this great industry of farming should be so ill-equipped with literature upon its housing. In the great groups of labour first comes the industry of transport and its services, second the metal workers, and third the art of agriculture, in which nearly one and a quarter million of workers are employed.

It was Napoleon who said that the prosperity of a country would ultimately depend upon agriculture, and though that statement was made before the industrial revolution took place, in a certain sense it still holds good. All sources of production except through things that grow are wasting assets and though the ingenuity of man is always being directed to discover substitutes for organic things he can only produce them by drawing upon the reserves of inorganic things. The moment one ton of coal is taken from the earth the value of the coal mine is lessened by that amount.

Farming is the greatest of all industries in its latent power of providing wealth for the service of mankind. Since the middle of last century, or perhaps a little earlier, there have been more profound changes in the art of farming than have occurred for many hundreds of years. The application of steam and now the more mobile power of the motor have brought about these changes, and in a lesser degree the public supplies of water and electric power have given the farmer much freedom and opportunity.

The intelligent housing of the farmer's stock, or, so to say, the covered-in part of his factory, is of vital importance to the success of the goods he produces, and this little book written by Mr. Gunn will be of great use to those who are in any way connected with this great industry. Apart from the many useful and thoughtfully prepared illustrations Mr. Gunn makes frequent reference to the documents that may be had from the Ministry of Agriculture and H.M. Stationery Office. Armed with these and Mr. Gunn's little book there should arise that most joyous of an architect's hopes—a host of intelligent and enlightened clients seeking him out to translate into material form the vision of a perfect farmstead.

M. CHESTERTON [F.]

ENGLISH SCHOOL BUILDINGS

SCHOOL CONSTRUCTION. *Bound copy of the school construction supplements to "Education," the journal of the Association of Education Committees. London: Published by "Education," 1934. No price.*

The journal *Education* regularly publishes supplements on school construction, which illustrate and describe in very full detail most of the recent school buildings in this country. The supplements as they appear periodically are of great value, a value which is increased by having them bound together, but which would be even more increased if an index had been added.

School building is one of the most highly specialised forms of architecture, demanding not merely the normal range of architectural ability to build and design well, but an understanding of the basic principles of modern educational methods and of the complicated regulations of the Board of Education. The present publication is of particular value because, unlike the pictures and descriptions which appear in architectural papers, the buildings are described from the school authorities' point of view. The publication is likely to be useful to all architects who do this type of work.

UNDERGROUND PASSAGES IN EXETER

REPORT ON THE UNDERGROUND PASSAGES IN EXETER. *By the Exeter Excavation Committee. Reprinted from Proceedings of the Devon Archaeological Exploration Society, 1934.*

For many years it has been known that a number of underground passages ran beneath the streets and buildings of Exeter, but it has only recently been possible to make a complete survey, and the pamphlet under review, in addition to an historical description and a number of excellent photographs, has trigonometric survey plans and other plans made for the Exeter Excavation Committee by two engineers, Mr. Thomas Brown and Mr. Wallace Thornycroft, and by Mr. Percy Morris [F.], whose architectural drawings are a model for clearness and simplicity. Documentary evidence and notes have been collected by Mr. K. M. Constable.

The evidence all goes to show that the passages were made to bring water into the city. They are of various dates from before 1226 (the passage from St. Sidwell's well to the Cathedral) until the fifteenth century. Two of the later conduits were in use until comparatively recently. The passages are constructed of masonry which shows signs of extensive repair; they are vaulted with truncated triangular vaults, barrel vaults, irregular pointed vaults or with segmental vaults. The documentary evidence is considerable and is very clearly summarised in the report which refers to documents from the *Gesta Stephani Regis Anglorum*, which describes a siege of Exeter in 1136, when Baldwin's party, defending the castle, "sallied forth from secret approaches." Reference is also made to tunnel cutting to undermine the castle walls.

The report is a first-rate piece of local research obviously done thoroughly and described clearly and attractively.

SCHOOL OF ARCHITECTURE, PENNSYLVANIA

BOOK OF THE SCHOOL OF THE DEPARTMENT OF ARCHITECTURE, UNIVERSITY OF PENNSYLVANIA, 1874-1934. *By the Architectural Alumni Society. Philadelphia, 1934.*

This excellently produced volume is a record of the work of the school, its buildings, its students and their work, which is

illustrated by 100 pages of good photographs. The work is an interesting record of architectural education in one of the most successful American schools.

ARCHITECTURAL GUIDE TO THE NANCY AND VERDUN DISTRICTS

GUIDE ARCHÉOLOGIQUE DU CONGRÈS ARCHÉOLOGIQUE DE FRANCE, XCVI. *Session tenue à Nancy et Verdun par la Société Française d'Archéologie. Paris: A. Picard, 1934.*

The 1933 Congress of the Société Française d'Archéologie was held at Nancy and covered by its tours a wide range of country in Meuse, Meurthe, Moselle and the Vosges, extending from Avoith in the north to Epinal in the south, one of the loveliest parts of all France. The conference guide which has been sent to the library is one of the most complete volumes of its kind we have seen, excepting only the previous guides published by the Society. In its 500 and more pages all the places covered by the conference are described in detail and illustrated by a large number of excellent photographs of the more important monuments. The interests of the congress as revealed by the guide were preponderantly architectural. There is no reference whatever to prehistory or even to ancient history. The book is more than a conference "handbook"; it is a guide of permanent value written by experts for experts, so that it has none of the superficialities of the usual popular guides. Its authors are MM. Deshoulières, Maurice Dumolin, André Philippe, Etienne Fels, Jean Nallery-Radot, Pierre Marot and Pierre d'Herbécourt. At the end of the volume are the conference papers read by M. Des Robert, president of the Société Archéologique Lorraine, M. Saintenoy, the Belgium Government delegate, M. Etienne Michou, delegate of the French Ministry of Education, and by M. Marcel Aubert, the distinguished President of the Society.

ARCHITECTURAL CHRONOLOGY

ARCHITECTURAL EVOLUTION. *By H. A. Townsend. London: Arthur Stockwell, 1934. 2s. 6d.*

This small book attempts to elucidate the styles of architecture from the earliest to the present time by presenting lists of the styles and phases of development and important monuments all fitted into an organised chronology. The problem is so complex that no small book can be completely successful. Nevertheless, Mr. Townsend's brave attempt is very creditable and will doubtless be useful to people who study the finer points of architectural evolution or need lists of monuments to illustrate particular plans. The chief difficulties, apart from the inherent difficulty of making a human process of development conform to a national yard-stick, come from lack of illustrations, ineffective headings and sub-headings which make some parts almost unintelligible; and Mr. Townsend's own system of arrangement, which is not always clear, partly because the small sized page used, makes it difficult to get a visual idea of the system. Mr. Townsend is, however, to be congratulated on his work.

SURREY ARCHÆOLOGICAL SOCIETY

SURREY ARCHÆOLOGICAL COLLECTIONS. Volume XLII. *Guildford: Surrey Archaeological Society, 1934.*

This, the latest volume of the Surrey Archaeological Society, contains a number of articles of architectural interest. Mr. P. M. Johnston [F.] writes on recent discoveries in Ewhurst Church, well illustrated by photographs and a plan. Sir Henry Lambert writes on Garratts Hall, Banstead, a good comfortable looking late seventeenth-century house, which has now been demolished. The author states truly that it is desirable that some permanent record should be made of good houses which are destroyed or allowed to fall to ruin. There could be no better occupation for the architecturally minded member of an archaeological society. Lieut.-Colonel H. F. Bidder writes on some new materials for the determination of the course of Stane Street.

Accessions to the Library

1934-1935—V

INCORPORATING NOTES ON RECENT PURCHASES

(These Notes are published without prejudice to a further and more detailed criticism.)

Lists of all books, pamphlets, drawings and photographs presented to, or purchased by, the Library are published periodically. It is suggested that members who wish to be in close touch with the development of the Library should make a point of retaining these lists for reference.

Books presented by Publisher or Author marked

R.

Books purchased marked

P.

* Books of which one copy at least is in the Loan Library.

ARCHITECTURE

GENERAL

*13 works, already in Library, to be added to the Loan Library.
Presented by Mr. William Carless.

PAIN (WILLIAM)

The Practical builder, or workman's general assistant: etc.
10½" × 8½". Lond.: I. Taylor. 1774. P. (15s.)

AUTHOR'S AND WRITER'S WHO'S WHO

—, 1934. Edward Martell, editor.
8½". Lond.: Shaw Pubg. Co. [1934.] Presented.

HISTORY

DIEZ (ERNST) and GLÜCK (HEINRICH)

Alt-Konstantinopel.
10½" × 8½". 25 pp. + pls. + folding pl. Munich: Roland. 1920. (5s.) P.

DE COSSON (ANTHONY)

Marcotis . . . North-Western Desert of Egypt and of Lake Marcotis.
8½". ix+209 (consec.) pp. + pls. + folding map. Lond.: Country Life. 1935. 15s. P.

ROTH (DANIEL)

Norman survivals in London. (Essay Medal. 1935.)
dupl. typescript. 13". [1935.] Presented by the Author.

LETHBRY (W. R.)

*Philip Webb and his work.
7½". (vi) + 234 pp. + front + 24 pls. Lond.: O.U.P. 1935. 6s. P. (2).
Posthumous.

NORMAND (J. L. M.)

Paris moderne ou choix de maisons, etc.
[Late ed., 480 plates.] 3 vols. 40. Liège [1840].
Presented by Mr. H. W. Keef.

DRAWING

HATTON (R. G.)

*Perspective for art students. 80. Lond. 1919.

LUBSCH (B. J.)

*Perspective: an elementary text book.
2nd ed. 80. New York. 1915.

ARMSTRONG (H. F.)

*Descriptive geometry. 1a. 80. New York. 1915.

MORRIS (I. H.)

*Geometrical drawing for art students. 80. Lond. 1929.

BROWN (F. C.)

*Letters and lettering. 80. Boston. 1912.

—All five presented by Mr. William Carless.

VOCATION AND PROFESSIONAL PRACTICE

ARCHITECTS' BENEVOLENT SOCIETY

Pension and family provision scheme for architects.
pam. 7¼". Lond. 1934. R.

WORSFOLD (Sir T. CATO)

The Law of repairs and dilapidations.
2nd ed. 7¼". xxi+211 pp. Lond.: Pitman. 1934. 7s. 6d. P.

LAXTON AND LOCKWOOD

Laxton's and Lockwood's Builders' Price Book, 1935. P. T. Walters, ed. 7¼". Lond.: Kelly's Directories. [1935-] 10s. 6d. P.

BUILDING TYPES

(CIVIL)

SWANSEA, Corporation

Souvenir of the opening of the Guildhall Swansea, etc. (1934).
[With views of town.]
12" × 9¼". 47 pp. (leaves) incl. plates. [Swansea. 1934.] Presented.

ROBERTS (C. W.)

The Lancashire cotton weaving shed. (Thesis for Final Examination, December 1934.) typescript and plates. 14½". 1934.
Leather-bound. Presented by the Author.

ARCHITECTURE D'AUJOURD'HUI, journal

*[Special number on hospitals and sanatoria.] (5th year, 4th series, No. 9; December.) 40. Boulogne. 1934. 12s. P.

SCHAEFER, S.A., Berne, publ.

*The Construction of modern hospitals and their equipment.
10". 666 pp. Berne: Schaefer. 1935. £2 15s. P. (2).

WATERLOO BRIDGE, London

Demolition of Waterloo Bridge.
dupl. typescript. 14". 1935.

(RELIGIOUS)

SUKENIK (E. L.)

Ancient synagogues in Palestine and Greece. (The Schweich Lectures of the British Academy 1930.)
9½". (xiii) + 91 pp. + front. + six pls. Lond.: O.U.P. for British Academy. 1934. 7s. 6d. P.

CAMBRIDGE CAMDEN SOCIETY

[Forms for descriptions of parish churches. Filled in in MS. for churches in various counties.] (Church schemes, back title.)
Partly MS. Bound in 5 vols. 9¼" × 7½". [1840-41.]
Presented by Mr. P. G. L. Webb.

MACKMURDO (A. H.)

Wren's city churches.
11½" × 9". viii + 133 pp. Orpington: G. Allen. 1883.
Presented by Mr. Charles Woodward [F.].

WESTLAKE (H. F.)

St. Margaret's, Westminster.—Descriptive and historical guide.
pam. 8½". [Lond.] 1914.

HARRISON (FREDERICK)

Sompting church (near Worthing, Sussex).
pam. 7¼". Hove. [191-] 3d.

MALAN (A. H.)

Altarnon church. (From Jnl. of Rl. Instn. of Cornwall, vol. x.)
pam. 8½". n.d. (1890.)

TAYLOR (THOMAS), editor

St. Endellion prebendal church. Its constitution and history. With an account of the parish fifty years ago by the Very Rev. F. E. Carter.
pam. 7¼". Truro. 1929. 1s.

WEIGALL (G.)

A Short description of the church of St. Andrew, Old Cleeve.
pam. 8½". n.p. [after 1918.] 2d.

CHESHIRE (J. G.)

S. Botolph's Church, Trunch. pam. 7¼". Norwich. [19—]

HOPE (W. H. ST. JOHN)

Notes on Clare Church, Suffolk. leaflet. 8". n.p. [after 1915.]

[CARTER (F. E.)]

The Church of the Blessed Virgin Mary, Hadleigh, Suffolk.
Revised [3rd] ed. pam. 8½". Hadleigh. 1934. 3d.

LOUND, Suffolk

The Church of St. John the Baptist, Lound.
pam. 8½". n.p. [19—]

ST. ALBANS: CATHEDRAL

The Cathedral and Abbey Church of St. Alban.
pam. 8½". St. Albans. 1925.

BARNETT (S. A.)

A Walk through Westminster Abbey.
[New ed.] pam. 7¼". Cambridge. 1908. 1d.

HOPE (W. H. ST. JOHN)

Recent discoveries in the Abbey Church of St. Austin at Canterbury. (*From Archaeologia Cantiana*, xxxii.)
pam. 8½". Lond.: Mitchell Hughes and Clarke. 1916.

OXFORD (A. W.)

Guide to Fountains Abbey. Plans and illus. . . by W. Wainwright.
3rd. ed. pam. 6½". Ripon: W. Harrison and Son. 1922. 1s.
—All presented by the Rev. Canon F. E. Carter, M.A. [*Hon. A.*]

HINTS

Hints to some churchwardens . . . repair and improvement of parish churches.
8½". Lond. 1825. Presented by Mr. E. L. Bird [*A.*].
(*Aquatint plates hand-coloured.*)

CAMBRIDGE CAMDEN SOCIETY

Illustrations of monumental brasses.
Nos. i and iv. 12½". Cambridge. 1840-41. Presented by Mr. P. G. L. Webb.

(EDUCATIONAL)**BARKING: EDUCATION COMMITTEE**

The Schools of Barking. [1932.]
Dorothy Barley and Bifrons Schools, Barking. [1934.]
(C. J. and H. H. Dawson and H. W. Allardyce, architects.)
2 pams. 9½". 1932, -34. Presented by Mr. H. W. Allardyce [*F.*].

ROBERTSON (HOWARD)

Schools of art, architecture and technology on the Continent.
(Godwin Bursary, 1933. report.) (With plans and 5 prospectuses in pocket.)
dupl. typescript. 12¾". [1933.] Presented by the Author [*F.*].

ROSA (E.) and JINDRA (J.)

L'Enseignement technique en Tchécoslovaquie. French text by E. Brázda.
9¾". 106 pp. + 109 etc. pp. of illus. Prague: Syn. 1930. Presented by Mr. Howard Robertson [*F.*] as part of his Godwin Bursary report.

ZÜRICH: GEWERBESCHULE UND KUNSTGEWERBEMUSEUM

Festschrift zur eröffnng des neubaues . . . 1933.
11½". (8) + 112 pp. + pls. [Zürich. 1933.] Presented by Mr. Howard Robertson [*F.*] as part of his Godwin Bursary report.

SCHOOL PROSPECTUSES

[Amsterdam (3), Bratislava, Copenhagen (2), Delft, Leipzig, Praz, Weimar.]
10 pams. v.d. All presented by Mr. Howard Robertson [*F.*] as supplement to his Godwin Bursary report.

(DOMESTIC)**NATIONAL HOUSING AND TOWN PLANNING COUNCIL**

Annual conference of local authorities . . . to consider [the housing situation, etc.] . . . June . . . 1935.
pam. 13¾". [Lond. 1935.] R.

GUNN (EDWIN)

*Farm buildings new and adapted. H. C. Long, ed.
8½". 86 pp. Hook, Surbiton: H. C. Long. 1935. 3s. P.(2).

WATTS (W.), engraver

The Seats of the nobility and gentry, etc.
ob. 7½" × 10¼". Chelsea: Watts. 1779. £1 5s. P.

CRAFTS**CLEMEN (PAUL)**

Die Romanische monumentalmalerei in den Rheinlanden. (Die Romanischen Wandmalereien der Rheinlande, *plates titles*) (Gesellschaft für Rheinische Geschichtskunde: text, Pubn. xxxii; plates, Pubn. xxv.)
2 vols.: text 13" × 10", plates 25" × 20". Düsseldorf: Schwann. text 1916, plates 1905. (£6 6s. the 2 vols.) P.

ALLIED ARTS AND ARCHEOLOGY**STUDIO, publ.**

Decorative art. 1935. (30th issue.) C. G. Holme, ed.
11¼" × 8". Lond.: Studio Ltd. 1935. 10s. 6d. R.

CARRINGTON (NOEL)

Design and a changing civilisation. (The Twentieth Century Library.)
7¼". xiii + 140 pp. + 14 pls. Lond.: John Lane. 1935. 3s. 6d. R.

DE LA VALETTE (JOHN), editor

The Conquest of ugliness. (By var. authors.)
7¼". xii + 207 pp. + front. + xv pls. Lond.: Methuen. 1935. 3s. 6d. R.

CHILDE (V. GORDON)

The Prehistory of Scotland.
9¼". xv + 285 pp. Lond.: Kegan Paul. 1935. 15s. P.

PALESTINE EXPLORATION FUND

Quarterly statement. For 1869 to 1912. Nos. i-viii (1869-70), N.S. Nos. i-iv (1871), and unnumbered.
21 vols. 8". Lond. [1869-1912.] Presented by Mrs. Holdsworth.
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*—, 1935. (37th year.) F. R. S. Yorke, editor.
12¾". Lond.: Archl. Press. 1935. R. & P.
(Including: Frame construction, 1935.
Equipment of flats.
Wall coverings.
Sliding members and gear.
Construction of covered sports clubs.)

ELEMENTS**INSTITUTION OF STRUCTURAL ENGINEERS**

Report on gravity retaining walls and concrete walls.
pam. 8½". Lond. 1934. 1s. 6d. R.

MATERIALS**SEELY (F. B.)**

Resistance of materials.
2nd ed. 9". xii + 436 pp. New York: J. Wiley and Sons. 1935. (18s. 6d.) R.

CARTWRIGHT (K. ST. G.) and FISHER (R. C.)

*Decay of timber in houses. i: Fungi injurious to timber.
ii: Insects injurious to timber. (*From Jnl. Chartered Surveyors' Institution*, xiv, pt. 9 (Mar.).) extract. 8½". 1935. R.(2).

BROOME (D. C.)

The Testing of bituminous mixtures . . . road and building materials. With chapter on roofing felts, by R. O. Child. (The Roadmakers' Library, ii.) With bibliography.
9". vii + 194 pp. Lond.: Edward Arnold. 1934. 15s. R.

ZAIMAN (A.)

Properties of bricks in relation to processes of manufacture. (Building Centre.) dupl. typescript. 13". [1935.] R.

COPPER DEVELOPMENT ASSOCIATION

Sheet copper-work for building. (C. D. A. Publication No. 5.)
9¾" × 7¼". 69 pp. 1934. R.

COPPER DEVELOPMENT ASSOCIATION

Some facts about copper tubing, *etc.* (Pubn. No. 2.)

pam. ob. 5" x 9". 22 pp. [Lond. 1934.] R.

COPPER DEVELOPMENT ASSOCIATION

The Behaviour of copper on exposure to the elements. (*Reprinted from Jnl. R.I.B.A.* 1934, 28 Apl.) (Pubn. No. 7.)

pam. 8½". [Lond. 1934.] R.

MARTIN (A. C.)

The Use of copper in plumbing. Frank Herod, *ed.*

6". Manchester: Plumbing Trade Jnl. [193-] R.

COPPER AND BRASS EXTENDED USES COUNCIL

The Use of copper and brass for domestic water services.

5th ed. 11" x 8½". 55 pp. + plates. [Birmingham.] 1932. 2s. 6d. R.

SANITARY SCIENCE AND EQUIPMENT

METROPOLITAN WATER BOARD

Byelaws . . . for . . . preventing the waste, undue consumption, misuse or contamination of water, *&c.*

(Amended issue.) pam. 9½". Lond.: P. S. King. [1935.] 6d. R.

BLAKE (F. G.)

Plumbing . . . (Technical Press Manuals.)

2nd ed. 2 vols. 7¼". Lond.: Technical Press. 1935. 6s. per vol. P.

ADAMS (S. H.)

Modern sewage disposal and hygienics.

8½". x+473 pp. Lond.: Spon. 1930. £1 5s. R.

MOLESWORTH (W. H.)

Spens' Electrical pocket-book.

4th ed. 6¼". Lond.: Spon. 1935. 6s. P.

SUTHERLAND (R. O.)

Exterior lighting of buildings and their town-planning aspects.

(Third Architects' Conference. Joint Committee, *etc.*)

pam. dupl. typescript. 13". [Lond.] R.

ACKERLEY (R. O.)

Lighting in relation to surface texture. (4th Architects' Conference. Joint Committee, *etc.*)

dupl. typescript. 13". 1935. R

PIRIE (H. L.)

The Application of coal and coal burning appliances to modern buildings. (Building Centre.)

dupl. typescript. 13". [Lond. 1935.] R.

DYE (F. W.)

Steam heating.

2nd ed. 7¼". vii+203 pp. Lond.: Spon. 1934. 7s. 6d. R.

SOCIETIES, PERIODICALS

SOCIETY OF ENGINEERS

Transactions for 1934.

(Including:

Shenton (H. C. H.) Sewage disposal.

Ancient lights. Ackermann's skymeter.)

With Index to Transactions, 1910-34.

SANDS, CLAYS AND MINERALS, *journal*

Vol. ii, No. 11 (August).

(Including: Lake (W. O.). Refractory cements.

Morreau (C. J.). Concrete aggregates.

North (F. J.). Limestones.

Warnes (A. R.). Old stone cross heads.)

TOWN AND COUNTRY PLANNING

INGEGNERE, *journal*

Notizie e commenti di urbanistica. [Town-planning supplements of Ingegnerie, June-December, 1934, published separately.] By V. Civico.

12". Rome: Lavora Fascista. 1935. R.

COUNCIL FOR THE PRESERVATION OF RURAL ENGLAND

Countryside Wardens. 5¼". Lond.: C.P.R.E. [193-] R.

COUNCIL FOR THE PRESERVATION OF RURAL ENGLAND

[Memoranda.] No. 35. The Silver Jubilee. Suggested forms of commemoration.

leaflet. 8½". [1935.] R.

MUSEUMS AND LIBRARIES

VICTORIA AND ALBERT MUSEUM

Review of the principal acquisitions during . . . 1934.

(Acquisitions include:

Girtin (Thomas), Turner (J. M. W.), Cotman (J. S.), and others. Water-colours.

Canaletto, Cotman (J. S.), and others. Drawings.

Adam (Robert). Pedestals from No. 19 Arlington Street, London.)

BIRMINGHAM: PUBLIC LIBRARIES

A Catalogue of the Birmingham Collection. . . . Compiled under the direction of W. Powell and H. M. Cashmore. (City of Birmingham Public Libraries. Reference Department.)

9¾" x 7½". xvi+1132 pp. Birmingham Corporation. 1918.

Supplement 1918-1931. Compiled . . . H. M. Cashmore.

9¾" x 7½". viii+914 pp. 1931.

Presented by the Corporation, through the City Librarian.

PUBLIC RECORD OFFICE

Catalogue of manuscripts and other objects in the Museum of the Public Record Office. By Sir H. C. Maxwell Lyte.

14th ed. 8¼" x 6½". x+96 pp. + 10 pls. Lond.: H.M.S.O. 1933. 1s. P.

MANUSCRIPTS

ECCLESIOLOGICAL SOCIETY

[Minutes.]

In one vol. 7½". MS. and printed insertions. 1854-66

Presented by Mr. P. G. L. Webb.

DRAWINGS

SMIRKE (Sir ROBERT)

Original sketches.

Mounted in a vol., 40. Pencil D. [18-]

Presented by Mr. Charles Woodward [F.].

WEBB (PHILIP)

Clouds House. Staircase newel, detail of carving.

(Framed.) Pencil, ink and colour D. 1885.

Presented by Mr. Arthur Keen [F.].

RIDGE (A. M.)

A Hall of Science and Art: design. (R.A. Gold Medal, 1865.)

(Framed.) Phot. of ink D. 1865. Presented by Mr. A. G. Sandon.

HENRY FLORENCE BURSARY REPORT, 1932-1933, II

BY THEODORE FYFE, M.A. (CANTAB.), F.R.I.B.A.

PRESENT-DAY HELLENISTIC RESEARCH AND CONSERVATION OF MONUMENTS AND SUGGESTIONS FOR FUTURE STUDY

The following is the final section of Mr. Theodore Fyfe's Report on Hellenistic Architecture which, through lack of space, was not included with the main body of the Report published in the JOURNAL of 26 January

EXCAVATIONS, REPAIRS, WORKS OF CONSERVATION, ETC., AND RECORDING.¹

GREECE

ATHENS—Excavations in the Athenian Agora

The excavations now being conducted in the Athenian Agora by the Americans (Field Director, Dr. Shear) are, perhaps, the most important piece of work under way in the northern area of the Mediterranean, excepting Antioch. Antioch has more possibilities, but nothing could be more transforming than the opening out of the entire region between the Theseum and the Acropolis, skirting the Areopagus in a south-easterly direction; and the American excavations aim at no less. The main part already excavated is directly beyond the east front of the Theseum, and the exposure of the descending rock at his point, giving the temple a natural elevation, is of supreme importance to its effect. One can now see, in fact, for the first time, what the Theseum was meant to look like, or put in another way, what the true siting of the Theseum was. Some day we shall get a reconstruction on paper of this region, or better still, a model. This will show the relationship between the Acropolis and another very important public and religious centre in the Athens of the fifth century B.C. The Theseum dominated this centre somewhere about the middle of its western side. It was not the only important building of that epoch in this region. A Tholos, a Bouleuterion and a Metroön were in the area below it. Slightly to the north was a Doric Stoa of two storeys, built of Pentelic marble, and probably late fifth century B.C., the order of which, though to slightly smaller scale than that of the temple above, compares favourably in beauty of finish with the best work on the Acropolis itself.

It is difficult for the moment to determine exactly what this region looked like in the Periclean Age. It has been built upon successively from archaic Greek to Roman times, and there are structural remains in evidence of the whole period. The excavators have a complicated task in front of them, which has not been minimised by the formation, about 1900, of the railway line between Athens and Phaleron. This line cuts through the important Stoa mentioned above. Fortunately, some data which were obtained at the time will enable the plan to be completed with a show of probability.

Enough has been determined already to link up the present excavations with the fine Stoa of Attalos of the early second century B.C., which was laid bare in 1908. This is a short distance to the south-east, and there is intervening ground carrying modern buildings, which will ultimately be cleared; but the block plan shows that there must have been one great system, at any rate in Hellenistic times.

¹ The list does not pretend to be exhaustive for the regions mentioned. Belevi and Pergamum are omitted here, but have been dealt with in the Report.

The Acropolis

The "restoration" of the Parthenon by M. Balanos has now reached completion. The north and west sides have been dealt with. Replacements were contemplated on the south side, but—perhaps fortunately—it was found that the fallen blocks were insufficient for the process. On the whole, it would seem that the works which have been carried out are justifiable. Wherever possible, actual blocks have been reinstated, but many of the columns have been patched, either with Pentelic marble or with cement toned with success to match the weathered original material. As the craft of cementing new buildings in Athens is perfectly understood, and as great care has been taken with the Parthenon, the results can certainly be commended. Only a small amount of marble patching has been attempted on the west front, principally at the north corner of the entablature and pediment. There can be no doubt that, in principle, the completion of the lines of the entablature on the north side was desirable, to make the whole building more intelligible when viewed from the Propylaea.

Excellent work has also been done in the Propylaea by the reinstatement of fallen ceiling slabs, etc., and of the upper drums and capital from one of the Ionic columns.

The bastion on which the Temple of Athena Niké stands is in an unsafe condition and has been shored up on its western face. The very considerable winding of this face is obvious. It has now been decided that the temple is to be dismantled and reinstated on a properly built bastion.

PERACHORA²

The excavations that have been in progress by the British School since 1930 are still yielding excellent results. Perachora occupies a unique and amazingly picturesque position on the cape which juts out prominently into the Gulf of Corinth on its north side, immediately west of Corinth. The actual site is about a mile in length, and contained a large residential area, some interesting hydraulic works, and the important religious centre right on the cape which constitutes the bulk of the site. This lies close to the sea, with a tiny harbour of its own, but an inland lake very near the sea is divided from it by precipitous cliffs. The main site contains a temple of the Geometric Age—the first of those dedicated to Hera Akraia, c. ninth century B.C.—a "triglyph altar," probably, and an archaic Doric temple (Hera Akraia III) of late sixth century B.C. Fragments of the second Doric temple (Hera Akraia II) are built into the third one.

All of these buildings are of exceptional interest.

In addition to the above buildings, there are the ground-works of a small Temple of Hera Limenaia, probably dating from the eighth century B.C.

² Mr. Humphry Payne has very kindly supplied me with the information given here, as I was unable to visit Perachora, though I saw the drawings and several of the smaller finds.

ASIA MINOR

IZMIR

The excavations in progress in the town affect a site which is mostly of Roman date, though there may be some late Hellenistic elements. The area of the site and the evidences of standing material are considerable. The work is being carried out by the Turkish authorities, under the direction of Selahettin Bey, Keeper of the German Museum.

Larissa

This fine hill site near the Hermus river, beside the road from Izmir to Bergama, is being cleared under German direction. Some interesting early Ionic capitals and responds in the dark grey basaltic stone of the region have been removed to the museum at Izmir. The considerable remains of walling dating from the late sixth or fifth centuries B.C. include a splendid polygonal retaining wall in two stages, resting on a polygonal wall-base of no appreciable projection. Each stage is about 6 feet 6 inches high, divided by a horizontal slightly projecting narrow band of masonry, with drafted edges to the blocks and a projection in the centre of each block. This wall is of a more reddish variety of the basaltic stone. The masonry is of very fine character, left with a picked surface.

TRANSJORDAN

JERASH

Dr. Clarence Fisher (Director of the American School of Oriental Research at Jerusalem) and his staff have now nearly completed the planning of the whole site as at present visible. Excavations conducted by Mr. Crowfoot and Mr. Horsfield have been carried out, up to a point, but a lot still remains to be cleared up. It is regrettable that such a splendid site as Jerash, on which British and American archaeologists are working in conjunction, should be handicapped by lack of funds at such an interesting stage. No excavation or repair was possible in 1934.

SYRIA

BAALBEK

The French are doing very good work at Baalbek. The general direction is in the hands of M. H. Seyrig and the resident architect is M. Pierre Coupel, A.D.P.G., both of the Service des Antiquités. I was fortunate in having two hours' attention from M. Coupel and from M. Michel Alouf, Conservateur of the monuments at Baalbek. The most important recent clearance is the Theodosian Church, which completely covered the large "altar." To expose the altar it was well worth removing the church, and the foundations of its western apses are still visible. The purpose of this "altar" is a little obscure, but it is clear that it must have served an important cult function. Its passages indicate that it was used for processional rites, but its upper structure is uncertain.

The removal of the Theodosian Church has secured valuable evidence of dating. A fallen column drum of the great temple was unearthed, which had a Greek inscription on its top bed dating it to A.D. 69, in Nero's reign. Further, a small altar pedestal was disclosed with an inscription in Roman lettering—IMP. VESPASIAN DIVO. It is therefore quite clear that Baalbek was commenced in the first century, though it may not have been completed till the reign of Antoninus Pius. The Bacchus Temple may be one of the later works, though from its style, it ought to belong to the (perhaps late) second century.

The principal ground-work now in progress is the clearance of the deposit of several feet in depth which occurs between the two temples. This is a much-needed work, as it will clear

the podium of the Bacchus Temple, at present partly below ground, and it will, of course, correspondingly emphasise the great height of the substructure of the Jupiter Temple.

The Bacchus Temple structure is receiving a lot of attention. Valuable engineering works, already partly completed, are in progress. Earthquakes had slightly disturbed the balance of the column support of the segmental vaulting stones (of immense size and weight) in the peristyle. In consequence the vault was in danger of falling. By the erection of wooden props round each column and against the cella walls, the vaulting stones are being raised by machinery and then lowered, after securing the satisfactory result of the columns moving automatically into their natural vertical positions.

Wherever necessary, abutments or re-seatings are being provided in concrete or stone, but there is a commendable absence of any attempt at general restoration. There is, in fact, no restoration, but only conservation.

When the various works necessary in the interior of the site have been completed, it is the intention to clear the whole of the outside perimeter, so that it will be properly visible. This is a most desirable work, as gardens, garden walls, watercourses and neglected heaps of stone and earth at present make it impossible to walk round the site.

PALMYRA

The conservation and repair works of the French Direction (resident architect, M. Amy) are also important and are being thoroughly undertaken. At present, the great side doorway in the Bel temple peristyle is almost completely hidden by scaffolding and shoring. It will be some time before the Arab village, still partially inhabited on one side of the walled precinct of the temple, is cleared away, but the French are aiming at complete clearance. There is a small but important excavation-museum at Palmyra, where architectural and sculptural fragments of exceptional interest are at present being stored.

ANTIOCH

Apart from the vast area of possible material at Antioch, site depth and subsoil water are great disadvantages. On the left bank of the Orontes, where accumulation has accrued from the higher ground reaching towards Mt. Silpius, the fine Hellenistic deposit is eight metres (about 26 feet) below the surface. In the plain, on the right bank of the river, the first-century mosaics were found at one and a half to two metres down.

Mr. Campbell is setting out the whole site in squares of 200 metres side, which are checked, as to level, by the benchmarks of the French survey. He will thus be able to locate any find with accuracy. He leaves specimen posts here and there for his depth stratification. As usual, the pottery results are valuable for dating purposes. An interesting fact is the presence of fine Pergamene ware of the first century B.C.

ITALY

HERCULANEUM AND POMPEII

Prof. Maiuri, Director of the Museo Nazionale at Naples, is responsible for the system of conservation at Herculaneum, which is similar to that of the "Nuovi Scavi" at Pompeii. It aims at presenting as accurate a picture as possible of the house as it originally existed, without overstraining restoration; in fact, the work is extremely well done and is worthy of all praise. With a few exceptions, the finest wall-paintings from Pompeii and Herculaneum have been removed to the Naples Museum; but it is refreshing to find several houses in the "Nuovi Scavi" in which the paintings have been left as they

were found, covered with large sheets of plate glass kept about three inches from the fresco, and further protected from light by roller blinds.

Pompeii, except for its latest uncoverings, has been fully planned and published, but a complete plan of Herculaneum

has not, so far, been visible. Through the kindness of Prof. Ferdinando Ferrajoli, of the superintendence of Antiquities, who was at work when I visited the site, I was able to see a complete plan, which will, no doubt, form an important feature of a publication of this remarkable town.

SUGGESTIONS FOR FUTURE STUDY

There are many opportunities both for *subject* and *district* research in Hellenistic architecture, and the following remarks may be useful to future holders of the Henry L. Florence Bursary.

1. *Petra*

I would place Petra as first in importance. It should be attempted by British architectural scholars, as it is in Transjordan, which is mandated to Great Britain. Anyone intending to give prolonged study to Petra should (besides obtaining the usual credentials) communicate with the Commanding Officer of the Transjordan Frontier Force at Zerka. It should be borne in mind that the late F. G. Newton made fine scale drawings of "El Khazne" (see Report, p. 359, footnote), but no architectural drawings of the other rock-cut works exist. The whole of these remaining works want accurate recording by scale drawings and by details of the mouldings, etc., to quarter full-size or full-size, and by similar details for El Khazne. A very good publication could be made from this material, which, apart from its intrinsic value to architects, is of the first importance archaeologically. No certain dating can be arrived at without full knowledge of the architectural evidence.

2. *Hellenistic Doric, Ionic and Corinthian Order Treatments*

These could be treated together, but each of them is really a subject in itself. The Corinthian capital has been studied most, so far—(Schlumberger, see p. 359, footnote)—but its connections with Early Christian and Byzantine capitals are not clear. There is ample material in Syria, Egypt, Italy and Greece. Apart from capitals, bases and entablatures need accurate recording. The same remarks apply more fully to the Doric and Ionic orders.

3. *Running Scroll-work Treatments of the Acanthus and Other Plant Forms in Friezes, etc.*

This is a fruitful and very interesting subject, having important connections with Romanesque and the Renaissance. Its derivatives can be found in the exuberances of some late fifth century B.C. Greek and fourth century B.C. Asia Minor examples. Traditional Hellenistic usages survived till the seventeenth century, as in some wooden church screens in the Greek Islands. These show valuable evidences of colour and gilding.

4. *Hellenistic Influences in Christian Architecture*

This is a wide and important subject. Its most obvious sectional aspects are, perhaps, general plans and sanctuary treatments. An investigation of the latter element in Hellenistic temples (e.g., at Palmyra and Baalbek) would form an attractive part of a subject

which could include pre-Constantinian Christian buildings, such as the chapel or meeting hall recently unearthed at Doura, which is said to contain the earliest known Christian paintings.¹

5. *The Lay-out and Leading Plan Elements of Hellenistic Cities*

In its town-planning aspects the groundwork of this study has been done by von Gerkan. Evidences that may yet be disclosed at Antioch and some sites now being excavated by the French in Macedonia, render it a difficult subject to undertake immediately, but it could certainly be carried a considerable length with advantage. The American plans of Corinth and Jerash are important.

6. *The Haurân*

This is a district study which has already been overhauled by de Vogüé and Butler. It would include the Jebel Druze and that part of Syria which lies between Damascus and Aleppo. It would have connections with No. 4 (above).

7. *The Further East*

Though it is rather remote from the Mediterranean, the excavations now being carried out at Doura-Europos, near the Euphrates, are yielding a lot of material which is, in the main, Hellenistic. The contacts of the Hellenistic powers—and particularly the Seleucids—with the Parthians, undoubtedly influenced the later development of Doura-Europos. Anyone visiting Doura should also visit Hatra, near Mosul, to see the Parthian work there. M. Cumont's works should be studied for both, and M. I. Rostovtsev's *Caravan Cities* gives a good general sketch of Doura-Europos, but the five preliminary reports on the excavations—see footnote below—give the material in full.

8. *Asia Minor Generally*

There is so much in Asia Minor that needs further investigation that it is hard to select one particular district as more important than another; but the eastern half of the country, including Cilicia, is the least known. The great difficulty in obtaining permission from the Turkish authorities for any full study must be taken into account. It would probably be necessary to confine study within strictly-defined geographical limits.

9. *Macedonia*

The account and photographs of the John Hopkins

¹ See the fifth preliminary report on the Doura excavations, by M. I. Rostovtsev and others (New Haven, 1934). I am indebted to Mr. Tarn for this reference.

University Expedition to Olynthus, published in the *Illustrated London News* of 10 November 1934, show the excellent material in Macedonia belonging to the later Greek epoch. The date of Olynthus—348 B.C.¹—is an extremely interesting one, as it is just previous to the Hellenistic output. Valuable French excavations are in progress at Philippi, and Greek excavations at Eratryra and Dion—(see Mr. Payne in *J.H.S.*, Vol. LII, Part 2, 1932). A comprehensive general report on Macedonia would be valuable.

10. Cyrene

It is probable that Cyrene will be much more useful for study in 1935 than in 1934. There was undoubtedly fine Hellenistic work there, as can be seen from the Aphrodite now in the Terme Museum at Rome. There is also an exceptionally interesting archaic Greek temple, as well as much Roman rebuilding. A visit to Cyrene might be combined with an investigation of the Roman city of Leptis Magna, near Tripoli, in relation to its Hellenistic background.

Correspondence

TENEMENTS IN REINFORCED CONCRETE

MODERN PLANS AND COMFORT

Borth Arian,
Rhoscolyn,
Holyhead.
28 March 1935.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—A mere town planner may be wholly ignorant of the mysteries of concrete construction; nor need he necessarily know a great deal about interior planning. But, as we used to say at School, "experientia docet": I had occasion to build for myself some years ago a summer cottage, the sitting room of which possesses four doors, one on either side of the fireplace, one at the opposite end, and one leading into the open air. The room, though modesty should forbid me to say so, is generally voted a pleasant one for summer use, when windows and doors are open and draughts are welcome, and at night there is no crowding round the fireplace. But once we spent an arctic Xmas at the cottage, and we then agreed that a summer cottage was not necessarily perfect for winter use. This experience moved my wife to declare that if ever it were possible for us to retire from

the hurly-burly of town life for the evening of our days, this cottage would not be the place she would agree to retire to. I replied that it was not designed for the purpose. (Please forgive this piece of family reminiscence.)

I observe that one of the two living rooms of the prize design for the Reinforced Tenement compares very favourably with my summer living room in the matter of doors, with the added refinement that the outside door is one of those next the fireplace. I did not study the conditions of the competition, but I would like to know if the Tenements were intended for summer use only? You yourself, Sir, say that "the flat planning shows a definite advance over accepted models." Perhaps a multiplicity of doors in a living room is a feature of modern planning and that draughts have been abolished by reinforced concrete construction? But I have seen some recent plans for tenements where living rooms present the antiquated appearance of greater comfort.—

I am, Sir, your humble and obedient servant,

PATRICK ABERCROMBIE [F.]

A NEW METHOD OF DRAWING VOLUTES

Wood Lodge,
Kill Avenue,
Dun-Laoghaire,
Co. Dublin.
27 March 1935.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—I am afraid that Mr. Gale has misunderstood my remarks about not giving the position, dimensions, etc., of the volute of an Ionic capital. In the old books on classical architecture it was usual to devote two plates to the capital of the Ionic Order. The first plate showed it complete with all its dimensions and ornaments, and with beautifully drawn volutes mysteriously curled against its sides. The second showed the construction by

which they were drawn. It is this second plate only that I have attempted to supersede. The two plates are necessary and complementary, and anyone wishing to draw an Ionic capital would first have to set up the structure of it from some "Plate No. 1." He would draw from this plate the position and size of the volute. The lines which are most easily and naturally drawn for this purpose are the four lines tangential to the top, the bottom, the inside, and the top of the first turn (see lines AB, EF, AE and CD, in Fig. 3 of my article). I have therefore described how a volute can be drawn within these lines. To give rules on the proportioning of Ionic capitals would be beside the point, as there are so many variations.

In any case, I had wished to show that my method was readily applicable to volutes beyond the range of those

¹ That is, the date of its destruction. The mosaics and other material illustrated may belong to the fifth century B.C.

employed in the Ionic Order. Though at present it seems confined to this particular subject, I see no reason why the volute, with its basis in pure geometry and its precedent in natural forms, should not be used in many other ways. When the modern style has become urbane and has clothed itself with ornament, who knows but we may not have volutes in floor patterns, metal work, glassware and so forth. A flexible and easily drawn volute may become an asset to the future designer as well as a memory of the past.

With regard to drawing a volute within the framework of a rectangular figure, I have not seen Mr. Gale's pamphlet, but I believe priority should be given to Mr. John Robinson, whose very cumbersome but nevertheless theoretically accurate method was described by Penne-thorne in the middle of the last century.

Mr. Wood's method for setting out the diagonals for the figure in half quadrants is a considerable improvement on the one I had in mind, and I thank him for the suggestion.—Yours faithfully,

ROBERT G. HEAL [A.]

THE LAW OF NUMBERS IN NATURE AND IN ART "DIVINE PROPORTION"

120 Cheyne Walk,
Chelsea, S.W.10.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—Mr. Heal's discovery for the drawing of volutes, though perhaps differing in the method of approach, appears to the lay mind to be much the same as that after which Leonardo da Vinci strove, which Penrose only just missed finding, which Cockerell, with his whelk-shell, held the Golden Key in his hand but failed in his attempt to turn the lock, all unaware of the secret beyond.

It remained for the late Jay Hambidge, lecturer at Harvard and Yale Universities, finally to discover the lost secret of Greek proportion, the stumbling block of architects, artists and craftsmen throughout the years succeeding the apogee of Greek art, and to bring it to a working conclusion, not only for the so-called "Ionic" volute of the Greeks, but for every detail of their temples, from the first lay-out of the ground plan to the tiniest "bead and reel" in the entablature. In the R.I.B.A. JOURNAL for 20 March 1920, there is a verbatim report of an address which Mr. Hambidge delivered on the subject.

For the setting out of volutes Mr. Heal alludes to eighteenth-century methods derived, as he says, from incomplete instructions of Vitruvius. Mr. Hambidge tells us that the Greek secret, which they had learned from the Egyptian rope-stretchers of temples and from Hindu altar-builders, was already lost by the time of Vitruvius: that in the theory that had been handed down that the Greeks took the proportions of their architecture from the human figure, the Romans understood a proportion in measurements in length, whereas a measurement in area was really implied. This clue, Mr. Hambidge told me, he found in his Euclid, and it was the starting point of his investigations. Furthermore, he explains the uses of the Greek formula as resulting in an ever living art, because it is based on a system parallel to the growth of living organisms.

This is where Mr. Heal's new method, in which the element of "Infinity" plays a prominent part, appeared to the unin-

tiated lay mind of your correspondent to be closely related to Mr. Hambidge's "Dynamic Symmetry."

The book, entitled "*Esthétique des proportions dans la nature et dans les arts*," by Monsieur Matila Ghyka, explains the same laws as those discovered by Mr. Hambidge, carrying them still further into the realms of the crystal, the plant and all living organisms. These laws of numbers seem to be the secret and the basis upon which the Master Mathematician planned the whole universe, as we understand it.

There have been many who have striven to discover these laws in the past, but apparently, with the exception of certain Gothic builders, few of them knew how to apply them. Monsieur Ghyka tells us of Fra Luca Pacioli di Borgo, a Franciscan whom Dürer visited at Bologna in order to be initiated into the mysteries of a "secret perspective." The "Divine Proportion" of Fra Luca's book (entitled "*De Divina Proportione*") proved to be none other than the "golden number" of the spiral, dear to the late Sir Theodore Cook and over which Leonardo pondered.

The following extract is translated from Monsieur Ghyka's "*Esthétique*": "Like the proud geometer who in days of old produced the Great Pyramid, like the architects and philosophers of the Periclean age, the minorite of Bologna and his friends, Pietro della Francesca (who taught him geometry), Alberti, Leonardo da Vinci, Jacopo da Barbari (who was his pupil) believed that in animate nature and in art, which derives from nature, the law of numbers proclaims itself eternally; Bramante, Raphael, Michael Angelo, Vignola, all were of the same opinion, and they held, moreover, that a complete knowledge of geometry and a profound study of the science of space were indispensable to all who, with brush, chisel or measuring tape, sought to create or to establish form. . . .

"Architects to-day," says Monsieur le Corbusier-Saunier, himself an architect, 'have never completely understood the teachings of the elementary books. They were never taught them at the École des Beaux-Arts.'"

More than ever to-day, when a new expression in architecture is evolving, does it seem necessary to seek out the "Divine Proportion" of Luca Pacioli di Borgo, the "Dynamic Symmetry" obtained through the use of the diagonal to the reciprocal of a root five rectangle of Hambidge and to seek out the formula of the universe, whatever that may be, and build our mammoth edifices so that they may conform in every detail to the rest of nature around them, and become once again, even as the mountains, rocks and forests, an integral part of the great Unity.

Begging your clemency for taking so much space. Believe me, dear Sir, yours faithfully,

CLAIRE B. GAUDET.

The Orchard,
Ballasalla,
Isle of Man.
16 March 1935.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—I have read with interest the article by R.G. Heal in the 9 March number of the JOURNAL, but I have always felt that any volute made up of segments of circles is not a true volute any more than an ellipse is technically correct if drawn from four centres.

I feel that true volutes can be drawn in practice by winding a piece of string around a cone, a cylinder or an inverted cone, the form of volute varying as the angle of the apex of cone or size of cylinder varies. This method gives a regularly varying radius for the curve of volute.—Yours truly,

J. CUBBON [F.]

Notes

MAJOR R. A. COOKSEY, T.D., R.E. (T.A.) [F.]

Major R. A. Cooksey has been appointed as Senior Architect to the Kent County Council.

COUNCIL FOR THE PRESERVATION OF RURAL WALES

The annual meeting of the C.P.R.W. will be held on Friday, 24 May, at the Castle Hotel, Bangor. Any member definitely unable to attend the meeting on that day is asked to write to the Secretary, Mr. J. D. K. Lloyd, 17 Great Marlborough Street, W.1.

YORKSHIRE EDUCATIONAL ASSOCIATION FOR THE BUILDING INDUSTRY

UNIVERSITY OF SHEFFIELD DEPARTMENT OF APPLIED SCIENCE

The Association will hold a Conference in the Mappin Hall, Department of Applied Science, Mappin Street, Sheffield, on Saturday, 6 April 1935, commencing at 2.30 p.m.

The Conference will be supported by the Lord Mayor of Sheffield, Alderman P. J. M. Turner, J.P., Professor F. C. Lea, D.Sc., M.Inst.C.E., of the University; Mr. J. M. Jenkinson [F.], President of the Sheffield and South Yorkshire Society of Architects; Mr. H. Payne, Vice-President of the Yorkshire Federation of Building Trade Employers. Sir Raymond Unwin D.Tech. [F.], chairman of the Building Research Board, will speak on "Craftsmanship in the Building Industry." For the evening session from 6 to 7 p.m. the speaker will be Mr. E. G. Warland, A.I.Struct.E., head of the Building Department of the Liverpool Municipal School of Technology, who will speak on "Modern Masonry." The President of the Association, Mr. W. H. Forsdike, F.I.O.B., will be chairman of the Conference.

By the kind permission of the University authorities, the Laboratories of the Department of Applied Science will be open for inspection from 1 p.m. by those attending the Conference, and interesting tests on building materials will be made.

All who are interested in building and housing are cordially invited to attend the Conference and Exhibition. Further particulars may be obtained on application to Mr. J. B. M. Hay, Hon. Secretary, Y.E.A.B.I., Technical College, Bradford, or from the Hon. Secs., Local Building Conference, Education Office, Sheffield.

SIXTH INTERNATIONAL CONGRESS FOR SCIENTIFIC MANAGEMENT

At the fourth meeting of the Council of the Sixth International Congress for Scientific Management, on which the Royal Institute of British Architects is represented by Mr. S. Pointon Taylor, Sir George Beharrell, the chairman, reported that the general arrangements were now settled. It was expected that the Patron of the Congress, H.R.H. The Prince of Wales, would open the proceedings at the Central Hall, Westminster. Of the two thousand members estimated, some 300 had already been enrolled in all parts of the world. Over 100 papers dealing with many phases of industrial organisation and control had been received and about 100 more were expected.

The Congress will discuss papers illustrating the best management practice in all parts of the world. References to actual technique will relate to specific problems and how

they have been met. It will provide opportunities for members to meet, in an informal way, people from other countries interested in the same problems as themselves. The subjects chosen for discussion will appeal to all those holding managerial positions in any capacity. The change in economic conditions throughout the world and the progress of invention have created a need for a new technique in management. It is intended that the Congress, by widening the public interest in these new phases of management, shall prove to be a definite milestone in the advance of management efficiency.

The Congress takes place from 15-20 July at the Central Hall, Westminster, and each member is entitled to the full proceedings in seven volumes containing about 200 hundred papers of the manufacturing, agricultural, distribution, educational and training, development and domestic sections, the reports and the discussions. The papers will be available in May and will be sent to members who ask for them beforehand. The full fee is two guineas.

H.M. Government will invite members to a reception. A reception will also take place in the Guildhall of the City of London by invitation of the Lord Mayor and Corporation. Further hospitality is offered by many companies and institutions.

Programmes and membership forms are now obtainable at 66 Portland Place, London, W.1, or from the Secretary of the Congress at 21 Tothill Street, London, S.W.1.

R.I.B.A. NEW BUILDING FUND

LIST OF CONTRIBUTIONS RECEIVED OR PROMISED

	£	s.	d.
Brought forward	12,677	16	8
W. J. Biggs [Student]	1	1	0
J. H. Burton [L.]	5	0	0
C. McArthur Butler [L., Retd.]	1	1	0
N. F. Cachemaille-Day [A.]	5	5	0
Frank B. Dunkerley [F., Retd.] (second contribution)	2	2	0
Thomas H. Eley [A.]	1	1	0
Harold Goslett [F.]	5	5	0
The Institute of Southern Rhodesian Architects	5	5	0
Richard B. Ling [F.]	2	2	0
W. Scotter Owen [F.]	2	2	0

In addition, the following Allied Societies have made further contributions under the arrangement whereby for a limited number of years a percentage of the annual contributions paid by the R.I.B.A. to the Societies in respect of the R.I.B.A. members thereof will be credited to the fund:—

Berks, Bucks and Oxon Architectural Association	16	11	1
Birmingham and Five Counties Architectural Association	0	8	5
Inverness Architectural Association	0	4	2
Manchester Society of Architects	27	17	11
Northern Architectural Association	0	1	5
Nottingham, Derby and Lincoln Architectural Society	0	4	10

Total received or promised to 30 March 1935 £12,753 8 6

In addition, the following donations in Singapore dollars have been received:—

Lim Soo Loon	
[Member of the Institute of Architects of Malaya] ..	\$25.00
F. G. London	
[Member of the Institute of Architects of Malaya] ..	\$10.00
S. L. Tanner [L.]	\$5.00
F. D. Ward [F.]	\$18.00
H. I. M. Zain	
[Member of the Institute of Architects of Malaya] ..	\$10.00
	<hr/>
	\$68.00

HOLIDAY COURSE FOR FOREIGN STUDENTS IN COPENHAGEN

The eighth annual holiday course for foreign students will be held this year in Copenhagen from 1 to 30 August, its purpose being the study of Danish language, life, literature and thought. The course consists of language classes, lectures on literature, education, trade, farming and industry, and sightseeing and sport. The tuition fee is 50 Danish kroner, and the approximate cost of lodging for the whole period 120 kroner.

For further particulars and programme of course apply to the Anglo-Danish Students' Bureau, 88a Gower Street, W.C.1, or to "Feriekursus," Frederiksholms Kanal 26, Copenhagen K., Denmark.

THE SOANE MEDALLION AND THE TITE PRIZE PRELIMINARY COMPETITIONS

In the United Kingdom 114 students took part in the Preliminary Competition for the Soane Medallion and 246 students took part in the Preliminary Competition for the Tite Prize.

The following students have been selected to take part in the Final Competitions:—

THE SOANE MEDALLION

- Mr. T. A. L. Belton (School of Architecture, University of Sheffield).
- Mr. Philip E. D. Hirst (Liverpool School of Architecture).
- Mr. Andrew S. Hood (School of Architecture, Edinburgh College of Art).
- Miss Anne W. R. Parker (School of Architecture, The Architectural Association, London).
- Mr. Joseph W. Pickering (School of Architecture, Hull College of Arts and Crafts).
- Mr. Cecil G. Stewart (School of Architecture, Edinburgh College of Art).
- Mr. Kenneth Warman (Leeds School of Architecture).
- Mr. Norman C. Westwood (School of Architecture, The Architectural Association, London).
- Mr. Ralph R. Wilkins (School of Architecture, The Architectural Association, London).

THE TITE PRIZE

- Mr. Vernon R. Abbott (Armstrong College School of Architecture (University of Durham), Newcastle-upon-Tyne).
- Mr. Christopher H. M. Bompas (School of Architecture, The Architectural Association, London).
- Mr. Alexander M. Graham (School of Architecture, Edinburgh College of Art).
- Mr. R. A. B. Hitch (School of Architecture, The Architectural Association, London).
- Mr. Charles H. Hyde (Birmingham School of Architecture).

Mr. A. H. H. Jenkins (School of Architecture, The Architectural Association, London).

Mr. James T. Latheron (Armstrong College School of Architecture (University of Durham), Newcastle-upon-Tyne).

Mr. Arthur G. Ling (The Bartlett School of Architecture, University of London).

Mr. W. M. T. Patrick (School of Architecture, The Architectural Association, London).

Mr. Paul K. Pope (The Royal West of England Academy School of Architecture, Bristol).

Mr. John C. Ratcliff (School of Architecture, The Architectural Association, London).

Mr. Donald P. Reay (Liverpool School of Architecture).

Mr. H. E. A. Scard (The Welsh School of Architecture, The Technical College, Cardiff).

Mr. Alexander B. Wylie (School of Architecture, Edinburgh College of Art).

Mr. Robertson R. Young (Liverpool School of Architecture).

R.I.B.A. PROBATIONERS

During the month of February 1935 the following were registered as Probationers of the Royal Institute:—

- ALEXANDER: PHILIP MOORE, "Sardon," Wellington Road, Timperley, Cheshire.
- ARUNDEL: KENNETH, 1 Oaksfield, Pinfold Lane, Methley, Leeds.
- BAXTER: EDGAR WILLIAM, Kingston House, Pierpoint Street, Bath.
- BEACMONT: ERIC WAITE, 28 Wingate Saul Road, Lancaster.
- BENNETT: JOHN STANLEY WILLIAM, 37 Madingley Road, Cambridge.
- BESWICK: ROBERT EASTCOTT EDWARD, 62 Rodney Street, Liverpool, 1.
- BIGGAR: GORDON BUCHANAN, 40 Riverside Road, Glasgow, S.3.
- BUCKLEY: ALAN SAMUEL, "Finchwood," Marple Bridge, Nr. Stockport.
- BUTLER: JOHN THOMAS, 97 Withy Beds, Dos Road, Newport, Mon.
- CUNNINGHAM: JOSEPH, 82 Birch Road, Parkhall, Dalmeir, Dumbar-tonshire.
- CUZENS: GERALD JOHN, 76 Leigham Court Drive, Leigh-on-Sea, Essex.
- FIRTH: JAMES RONALD, 23 Florence Avenue, Doncaster.
- GIBSON: JAMES EDWIN VICTOR, 27 Lynton Road, Crouch End, N.8.
- GLADSTONE: DAVID STEUART, 56 Curzon Street, W.1.
- GOULDEN: HARRY, 68 Rutland Road, Chesterfield, Derbyshire.
- HINDE: JOHN WILFRID, Weanleigh, Street, Somerset.
- HODGES: HUGH FLEMING, 6 Eccleston Street, London, S.W.1.
- HURST: RONALD WALKER, Tudor Cottage, Hangleton Road, Brighton.
- JONES: ANTHONY WILSON, Lower Plover, Knutsford.
- KENT: PAUL, "Penitreach," Barncoose, Nr. Redruth, Cornwall.
- KNIGHT: RALPH WILLIAM, "Corona," Westgate, Chichester, Sussex.
- LOVE: HENRY, 18 Belmont Park, Strandtown, Belfast.
- McMULLON: STANLEY JOHN, 28 Cranley Road, Ilford, Essex.
- MILNE: WILLIAM FRASER, 7 Peel Street, Loches, Dundee, Angus.
- MURPHY: GEORGE ALFRED, 2 Braddons Terrace, Hillesdon Road, Torquay.
- NEWCOMBE: PHILIP CLIVE, JR., Emmanuel College, Cambridge.
- PALMER: LESLIE ERNEST, Beacon Cottage, Beacon Way, Banstead, Surrey.
- RENNIE: ARTHUR, 431 Clarkston Road, Muirend, Glasgow, S.4.
- ROBINSON: ALFRED EGBERT, "Westbury," Russell Street, Long Eaton.
- SAYER: ALON JOHN HOLLAND, "Northcourt," North Street, Sheringham, Norfolk.
- SCOTT: CURT GEORGE, 22 Richmond Bridge Mansions, E. Twickenham.
- SOLOMON: BERNARD BERTRAM, 332 Kingsland Road, Hackney, E.8.
- STURDY: JOHN FRANCIS, Ceredigion, Ravenhill, Swansea.
- THOMAS: ELMA ALBERTA JOAN, 28 Upper Park Road, Hampstead, N.W.3.
- TREASURE: BERNARD JOHN, 7 Gloucester Row, Clifton, Bristol, 8.
- WALKER: JAMES REGINALD, "Netherfield," St. James Street, Heckmondwike.

Obituary

EUSTACE LAURISTON CONDER [F.]

We regret to have to record the death of Mr. Eustace Lauriston Conder, the eminent architect, on 20 January, after a short illness.

In the passing of Lauriston Conder the British community of Buenos Aires loses one of its most respected members. He was the son of the Rev. Eustace Rogers Conder, D.D., and was born on 28 September 1863. Educated at Leeds Grammar School, The University College of London, and the School of Architecture of the Royal Academy, he adopted architecture as a profession, and was eventually elected a Fellow of the Royal Institute of British Architects in 1905.

In 1888 he came to the Argentine and was appointed Architect to the Central Argentine Railway, with residence in Rosario de Santa Fé. Ten years later he came to Buenos Aires to erect the Central Offices of that railway in the city, and he quickly established the successful practice in which he was actively engaged up to the time of his death. In 1911 he was elected Vice-President of the Sociedad Central de Arquitectos.

As an architect Conder was responsible for many important buildings in Buenos Aires and the Provinces. Space does not admit of a complete list of these, but mention may be made of the several buildings for the South American Stores "Guth and Chaves, Ltd.," the extension of the Anglo-South American Bank, and his largest undertaking, the Terminal Station of the Central Argentine Railway at Retiro. In 1926 he designed the reconstruction of Prince George's Hall, which, in its more ample form, was intended as the central meeting-place of the British community in the Argentine.

Conder's time was always fully occupied by the demands of his profession, and he was never able to take a really active part in the public affairs of the British community. He was, however, a prominent and highly esteemed member of the Society of English-speaking Freemasons in this country, and his work in the three Orders of which he was a member re-

ceived recognition in appointment to high rank as Past Assistant Grand Superintendent of Works in the United Grand Lodge of England, and Past Grand Standard Bearer in the Grand Chapter of Royal Arch Masons of England, whilst in Mark Masonry he held the highest office in this country as District Grand Master.

Amongst his wide circle of friends and acquaintances Conder was known as a man of sterling character, whose whole life was guided by an unflinching honesty of purpose. He loved good work for its own sake, and he detested slovenliness.

MR. C. W. HORSER [L.]

Mr. Cotterell Walter Horser, of 53 Fleet Street, architect and surveyor, died on 13 January 1935, after an operation at the age of 68.

Mr. Horser received his education at Oxford, and was in due course articled to Mr. H. A. Tobbit, a well-known architect of that city and surveyor of the County of Oxfordshire. For many years thereafter Mr. Horser was associated with the firm of St. Aubyn and Wadling, architects of London, subsequently commencing on his own account the very successful practice which he carried on until his death. Among other important appointments he held professionally was the appointment of surveyor to the Honourable Society of the Middle Temple.

When 19 years of age he entered the service of the Middle Temple and retired eight years ago, having been deputy surveyor for a long period. He was well known in the Law Courts, as he was of great assistance in forming and carrying out the novel procedure of the "Independent Witness," which is now officially recognised in part of the New Procedure. Upon numerous disputes about building operations, covenants to repair, and so forth, he was called in to act for both sides, thus eliminating the unsatisfactory practice of conflicting experts, with its partisan bias and waste of time and money. His written opinion was often the basis of a timely and satisfactory settlement, and in some cases his employment prevented litigation. He had a fair and judicial mind instructed by great experience. His work covered the more general field of architecture without specialising in any of its numerous branches. He was elected a Licentiate of the R.I.B.A. in 1911. He was also a Fellow of the Surveyors' Institution. His hobbies were shooting and bee-keeping.

Allied Societies

LEICESTER AND LEICESTERSHIRE SOCIETY OF ARCHITECTS

ANNUAL DINNER

The annual dinner of the Leicester and Leicestershire Society of Architects was held on the 19 March at the Grand Hotel, Leicester.

Mr. T. Trevor Sawday presided, and was supported by the Lord Mayor and Lady Mayoress (Alderman and Mrs. E. Grimsley), Mr. W. A. North (High Sheriff of the County), Sir Giles Scott, R.A., and Lady Scott, Sir Ian MacAlister and Lady MacAlister.

Dr. N. I. Spriggs (President of the Leicester Medical Society), Mrs. Spriggs, Alderman A. Hawkes, Major L. V. Wykes (President of the Leicester Chamber of Commerce), Mrs. Wykes, Mrs. Sawday, Mr. Yates (President of the Leicester Builders' Federation), Mrs. Yates, Mr. W. Freer (President of the Leicester Plumbers' Association), Mrs. Freer.

Mr. C. H. Calvert (President of the Notts, Derby and Lincs Society of Architects), Mr. J. Jenkinson (President of the Sheffield and Yorkshire District Society of Architects).

The toast of "The City and County of Leicester" was proposed by Mr. W. A. North. In his reply the Lord Mayor said no city had such a variety of buildings as Leicester. He regretted that economic circumstances prevented architects extending their work, and

wished they were free from them, as they had a cramping effect upon their work.

The President of the Leicester and Leicestershire Society, Mr. T. Trevor Sawday, proposing the toast "The Royal Institute of British Architects," stressed the importance of the Institute, which, he said, was formed in 1834 by men whose aim was art and architecture.

Sir Giles Scott, in reply, said this was the first time he had been in Leicester.

He referred to the great significance of the growing public interest in architecture.

It was, he said, an undoubted fact that in the last fifteen years they had seen a remarkable change in the public attitude towards architecture.

It was a reaction to the attitude of the period when architecture was the Cinderella of the arts.

The growth of public taste in architecture was a great encouragement to the Institute to leave its mark on the civilisation of its time. The responsibility of municipal authorities had increased, and the amenities and appearance of a town were such that it was desirable that they should have the best expert advice it was possible to get.

"One looks forward to the time when everything will become

naturally beautiful, instead of being artificially legislated for," he said.

Other speakers were Sir Ian MacAlister, Mr. E. C. Bewlay, Mr. Anthony Herbert, and Mr. R. U. Rodwell.

Sir Giles Scott presented the R.I.B.A. bronze medal for the best building erected in Leicester, Leicestershire, and Rutland in the three years 1931-1933, to Messrs. Symington, Prince and Pike, who designed Kay Bee House, Charles Street, Leicester. It was received by Mr. M. Pike.

THE BUCKINGHAMSHIRE SOCIETY OF ARCHITECTS REPORT OF ANNUAL GENERAL MEETING

The annual general meeting of the Society was held at the Crown Hotel, Slough, on Thursday, 21 March, when Mr. G. Langley Taylor [F.] occupied the chair for the last time of his term of office. After the annual report and the balance sheet had been read and adopted, officers for the ensuing year were elected as follows: Chairman, Mr. W. David Hartley [F.]; Vice-Chairman, Mr. G. Langley Taylor [F.]; Hon. Secretary, Mr. A. R. Borrett [J.]; Hon. Treasurer, Mr. J. C. Blair; Hon. Auditor, Mr. H. J. Stribling [J.]; Hon. Librarian, Mr. A. Cooper [J.]. Members of Committee: Mr. E. A. L. Martyn [J.], Mr. G. H. Williams [F.], Mr. A. A. Stewart [J.], Mr. C. H. Riley [L.], Mr. C. S. Kimpton [J.], and Mr. W. G. Percy [L.].

Mr. Langley Taylor, in response to a hearty vote of thanks accorded him, said how much he had enjoyed the two years he had filled the chair and touched upon the useful and public service it had been the Society's privilege to perform during that period. He was most gratified that the Society's scheme in collaboration with the Bucks Branch C.P.R.E. had been satisfactorily accomplished, and portfolios of plans for houses costing up to £350 had been deposited, with the co-operation of various Local Authorities, at Council offices in the county. He was also indebted to members for their response in the preparation of a further portfolio of plans for houses costing from £400 to £750.

Referring to Advisory Panels, Mr. Langley Taylor commented upon the useful and public-spirited work members were honorarily serving to the community in sitting upon the Advisory Panels. These had now been set up practically throughout the county and were greatly assisting the Local Authorities in the control of elevations under the Town and Country Planning Act (1932). Much useful work had been done in the past, but a great amount remained if our rural amenities are to be safeguarded.

High tributes to Mr. A. R. Borrett were paid for his untiring work as honorary secretary, and in spite of his request to retire, he was persuaded to continue in office and his decision received with acclamation.

The newly-elected chairman, Mr. Hartley, stated his wish to continue on the lines of previous activities, and in view of the increasing membership of students, to organise competitions for design and also measured drawings and sketches of buildings of architectural merit.

The meeting was followed by an excellent Paper on "Carving and its Place in Modern Architecture," by Mr. J. C. Blair, and after informal discussion a hearty vote of thanks was passed.

EDINBURGH ARCHITECTURAL ASSOCIATION

The Annual General Meeting of the Edinburgh Architectural Association was held at 15 Rutland Square, when Mr. A. F. Balfour Paul, F.R.I.B.A., was re-elected as President for the ensuing session. Messrs. John Begg, G. D. Macniven, J. A. W. Grant, T. Aikman Swan, Leslie G. Thomson and G. L. Martin were elected to the Council. The annual report submitted by Mr. A. Nicol Bruce, W.S., the Secretary and Treasurer, stated that the membership of the Association had increased by 189 during the past four years, the total net membership now being 453, while the invested funds showed an appreciation of 61½ per cent. during the past 3½ years. A successful series of lectures and visits had been carried out. Cordial congratulations were expressed to nine members of the Association, who had gained leading prizes awarded by the Royal Incorporation of Architects in Scotland and by the R.I.B.A. and likewise to the architectural staff of the Edinburgh College of Art. Eight members of the Association had given course of lectures on Professional Practice

to the students at the College during the session. The Association had made sundry grants, including £50 to the R.I.B.A. New Building Fund, while a valuable series of lantern slides had been presented to the Association by Mr. Henry F. Kerr, A.R.I.B.A. The Association had lost valued members through the death of Mr. J. Graham Fairley, F.R.I.B.A., and Mr. J. M. Johnston, F.R.I.B.A. The Association's Stand at the Scottish National Housing Exhibition had proved the centre of attraction to many thousands of visitors. A memorandum had been submitted by Deputation of the Association to the Lord Provost's Committee as to devolution of certain Corporation work, and it was hoped that in due season the services of the Architectural profession in Edinburgh would yet be made available to the Association's valued colleague and member, the City Architect. The annual "At Home" had been attended by a large number of representative citizens, the whole position of the Association being regarded by the Council as eminently satisfactory.

ROYAL INCORPORATION OF ARCHITECTS IN SCOTLAND

At the monthly meeting of the Council of the Royal Incorporation of Architects in Scotland, held at 15 Rutland Square, Edinburgh, Mr. Wm. B. Whitie [F.], President, in the chair, it was decided to publish an explanatory pamphlet as to Architectural Career. The Council voted renewal of annual subscription to the A.P.R.S. Mr. James A. Arnott [F.] was appointed representative to the R.I.B.A. Board of Architectural Education for the ensuing session. It was agreed to exchange all periodicals published by the Incorporation with the Academy of Architecture, Moscow. The following new members were elected: Messrs. G. Watt and E. L. Williamson (Aberdeen); F. A. G. Inglis (Keith) and Alex. Smellie (Glasgow), as *Fellows*; Messrs. D. W. Innes (Aberdeen), E. M. Judge (Crieff), Alex. Fraser (Glencarse), I. B. Kinnear (Dundee), J. H. F. Stewart (Lanark), and Arch. MacLean (Glasgow), as *Associates*; and Messrs. Douglas Beaton, Geo. Cruickshank, David Main, D. J. MacDonald, E. M. McIntyre, J. C. Richardson, T. W. Gow, J. B. Johnston, Patrick Keir, G. N. Middleton, J. S. Reid, E. P. Sharkey, D. J. J. Wright and G. D. Diack (Aberdeen), J. A. Rew (Dundee), J. G. MacGruer, W. R. Annan, M. J. Brown, A. M. Hunter, W. H. Kenlo (Edinburgh), A. S. McMurray and J. J. Roberts (Bathgate), John Nicol (New Lanark), A. S. Todd (Coatbridge), Jas. Robin and E. R. Harrison (Glasgow), and the Misses A. N. Turnbull, E. F. Comrie (Edinburgh), and G. M. H. Henderson (Glasgow), as *Students*.

WEST YORKSHIRE SOCIETY OF ARCHITECTS

Alderman W. Illingworth took the chair at a meeting of the Bradford Branch held there on 21 February, when Mr. W. Alban Jones started an interesting discussion by giving the members "My Impressions of the New R.I.B.A. Building." Mr. Victor Bain, president of the society, also gave his views on the subject, and was followed by several members who took part in the discussion. A vote of thanks to Mr. Alban Jones was proposed by the Bradford City Architect, Mr. H. Fletcher.

Arrangements have been made to hold the meetings of the Huddersfield branch of the society at the Technical College. Mr. Harold Thornton has been added to the committee, and Mr. Norman R. Lunn has been appointed joint hon. secretary.

For the Dewsbury Branch, a local sub-committee has been appointed consisting of Messrs. H. Thornton, B. Arch. T. Blakely, and N. A. Blackburn.

Largely owing to the activities of Messrs. C. E. Fox and G. Maddock in obtaining the requisite number of members, the Halifax branch has now been formed, and it only remains to hold an inaugural meeting for the election of the necessary officers.

The Society continues its crusade in arranging lectures by its members to secondary school students. On 1 February, Mr. John Needham gave an address at the Bingley Grammar School, on "Modern Architecture" to an audience of about 40 senior boy students, the chair being taken by Mr. Allan Smailes, M.A. This lecture was repeated at Saltaire on 21 February to an audience of over 200 boy and girl students.

On 12 March, Mr. C. Sunderland lectured at the Whitcliffe Mount Grammar School, Cleckheaton, his subject being "This is

Architecture," which was illustrated by some 80 lantern slides. The audience consisting of about 40 senior boy and girl students.

On the same date, Mr. Norval Paxton, hon. secretary of the society, gave an address at the Harrogate Grammar School, on "Modern Architecture." The head master, Mr. H. R. C. Carr, presided over an audience of 130 students and staff.

Mr. G. H. Foggitt, a past president of the society, lectured on 18 March on "Architecture and History" at the Technical College, Wakefield, to an assembly of 160 students, and senior boys and girls from the school of art and secondary schools.

Mr. Victor Bain, president, took the chair at a meeting of the society, held at its Leeds headquarters on 14 March, when a lecture on "Sculpture on Machine-made Buildings" was given by Mr. Eric Gill, who reminded his hearers that by the year 1850, the art of the studio had become completely cut off from the work done in the factories. The idea of art had become divorced from the idea of making objects. Art had come to mean simply the business of making pictures of things, and the word "art" had become inextricably mixed with the idea of the pictorial. To counteract this, the art schools tried to imbue the factory owners with the idea that art should adopt the idea of making plain things attractive, and so, plain things became fashionable. The word "artistic" came to mean plain. It became clear that under industrial conditions only plain things could be called good things.

With regard to decoration, one was allowed more licence in the interior of buildings than in the streets and public places, where nobody had the right to exhibit to the public things which were demonstrably foolish. It was all to the good that people were beginning to realise that sound construction was more desirable than machine-made ornament, and consequently they should see that sculpture was absurd on machine-made buildings. Sculpture as such did not "go" with modern buildings, not because the sculpture was bad, but because it was the wrong kind of thing. There was only one place for sculpture on buildings to-day; for instance, it was seemly and reasonable to put a carved symbol as a sign of the purpose of the building. An insurance company might want an image of the sun over its doorway, but it did not want a hundred suns; while another would only need one image of Prudence upon the façade. But that kind of thing was not to be classed with architectural sculpture, because its purpose was not to adorn the building. The reason for its existence was the need of those who used the building. That kind of sculpture had a right to be there because it was useful. If the sculpture as such on modern buildings failed, it was because the sculptors had given too much consideration to beauty, and not enough to questions of meaning. They were, in fact, suffering not from too little attention to beauty, but from not enough attention to intelligible meaning. Sculptors of to-day should give more attention to the real meaning their works should convey if they were to fulfil the purpose for which they were intended by those who paid for them.

Mr. W. Alban Jones, in moving the vote of thanks, said that although Mr. Gill had given them a lecture of absorbing interest, and had ably diagnosed the symptoms of the present-day conditions of sculpture and art generally, he did not seem to have suggested a cure for the malady. With regard to repetition of ornament, was not that found upon Greek and Roman mouldings much akin to machine-made work to which the lecturer had referred, and did he advocate the total abolition of machinery?

They all knew and admired Mr. Gill's work, remarked Colonel H. W. Barker, in seconding, and no doubt he had given them a most intellectual address, and of such importance that he hoped the society would reprint it for distribution.

Mr. Jacob Kramer, the Leeds artist, spoke in admiration of Mr. Gill's work, particularly of that in connection with the war memorial at the Leeds University building.

The Director of the Leeds Art Gallery, Mr. Philip Kendie, said he placed the lecturer in the forefront of British living sculptors, because all his work showed such close sympathy with the mind of the community, that it went far to solving the problem of architectural sculpture. At the same time the people whom the speaker had to cater for, demanded a little art for art's sake, and the perpetuation of beauty alone. Usefulness had, perhaps, been a little too much stressed, for, the people who could not afford to purchase highly-priced works of art, should not have access to such denied.

SOUTH WALES INSTITUTE OF ARCHITECTS

CENTRAL BRANCH

Under the auspices of the South Wales Institute of Architects (Central Branch) and the Institute of Builders (South Wales Branch), Mr. J. G. West, O.B.E., F.R.I.B.A., gave a lantern lecture entitled "Some Aspects of the Architectural Work of H.M. Office of Works" on Thursday, 21 March 1935, in the Lecture Theatre, Engineers' Institute, Park Place, Cardiff.

Mr. West, Chief Architect of H.M. Office of Works, described in an interesting manner the work and methods of the organisation maintained by the State to deal with the erection and maintenance of buildings for those engaged in the Public Service. He touched on the origin and development of the Office of Works and after indicating the stages through which a normal building scheme passes, he explained the design and construction of various types of buildings erected by his department in various parts of the world, illustrating his discourse with an excellent set of lantern slides.

Mr. John Williamson, A.R.I.B.A., Chairman of the Central Branch of the South Wales Institute of Architects, presided over a large and representative audience.

A hearty vote of thanks to the lecturer was carried with acclamation on the proposal of Mr. W. S. Purchon, who pointed out that flat roofs, long horizontal strips of windows and even windows at the angles of buildings are not always the most efficient and economical and when they are not, other forms and arrangements may well be what is known as "functional." Mr. Percy Thomas, in seconding the vote of thanks, expressed the great pleasure felt by himself and other local architects and builders in hearing such an informative address from a Cardiff boy who had risen to the position of Chief Architect to H.M. Office of Works.

THE BIRMINGHAM AND FIVE COUNTIES ARCHITECTURAL ASSOCIATION

At the tenth meeting of the current session, held on Wednesday, 20 March, the chair was occupied by the President, Mr. William T. Benslyn [F.], and a paper on Sculpture was read by Mr. Stanley Casson, Reader in Classical Archaeology, University of Oxford.

It was impossible, Mr. Casson said, to divorce sculpture from its architectural setting, for even in open squares and streets it must always bear some relation to its architectural surroundings; on the other hand, however, it must always have an independent life as a work of art. It must, moreover, possess rhythm and unity of style and type, and the sculptor must ever keep in mind the qualities and limitations of his material.

The paper was illustrated by a number of lantern slides, including several of the Racić family mausoleum, by Mestrovic, at Ragusa Vecchia.

Notices

THE EIGHTH GENERAL MEETING, MONDAY,
15 APRIL 1935, AT 8.30 P.M.

At the Eighth General Meeting to be held on Monday, 15 April, the Royal Gold Medal 1935 will be presented to Mr. W. M. Dudok. Evening dress optional.

SPECIAL GENERAL MEETING, MONDAY,
15 APRIL 1935

A Special General Meeting will be held at the conclusion of the Eighth General Meeting to consider Resolutions concerning a proposed new Bye-law 43A. Full details were published in the JOURNAL for 23 March.

SOCIAL EVENING, MONDAY, 29 APRIL 1935

The R.I.B.A. Dramatic Society will give a performance of three short plays on Monday, 29 April 1935, commencing at 8.30 p.m. Admission will be by programme, price 5s. and 3s.; refreshments in the interval. Full details will be found in the editorial columns of this JOURNAL (page 628).

ANNUAL SUBSCRIPTIONS

Members' subscriptions, Students' and Subscribers' contributions became due on 1 January 1935.

The amounts are as follows:—

Fellows	£5 5 0
Associates	£3 3 0
Licentiatees	£3 3 0
Students	£1 1 0
Subscribers	£1 1 0

NOTE.—By a resolution of the Council dated 20 July 1931, the subscriptions of R.I.B.A. members in the transoceanic Dominions who are also members of allied societies in those Dominions are reduced to the following amounts as from 1 January 1932:—

Fellows	£3 3 0
Associates	£2 2 0
Licentiatees	£2 2 0

COMPOSITION OF SUBSCRIPTIONS FOR LIFE MEMBERSHIP

Fellows, Associates and Licentiatees of the Royal Institute may become Life Members by compounding their respective annual subscriptions on the following basis:—

For a Fellow by a payment of £73 10s. (70 guineas).

For an Associate or Licentiate by a payment of £44 2s. (42 guineas), with a further payment of £29 8s. on being admitted as a Fellow.

In the case of members in the transoceanic Dominions who are members of allied societies in those Dominions, the following basis will operate:—

For a Fellow by a payment of £52 10s. (50 guineas).

For an Associate or Licentiate by a payment of £31 10s. (30 guineas), with a further payment of £21 (20 guineas) on being admitted as a Fellow.

Provided always that in the case of a Fellow or Associate the above compositions are to be reduced by £1 1s. per annum for every completed year of membership of the Royal Institute after the first five years, and in the case of a Licentiate by £1 1s. per annum for every completed year of membership of the Royal Institute, with a minimum composition of £6 6s. in the case of Fellows and £4 4s. in the case of Associates and Licentiatees.

THE USE OF THE TITLES "CHARTERED ARCHITECT" AND "REGISTERED ARCHITECT"

Now that the Registration Act is in force the Council have been asked to give advice with regard to the best way to use the title "Registered Architect" by members of the R.I.B.A. who have been placed on the Register, and who already have the right to use the designation "Chartered Architect."

The Council recommend that members of the R.I.B.A. who have been registered should use the designation "Chartered and Registered Architect."

NEW CLASSES OF RETIRED MEMBERS

Under the provisions of the revised Bye-law No. 17 applications may now be received from those members who are eligible for transfer to the class of "Retired Fellows," "Retired Associates," or "Retired Licentiatees."

The revised Bye-law is as follows:—

"Any Fellow, Associate or Licentiate who has reached the age of fifty-five and has retired from practice may, subject to the approval of the Council, be transferred without election to the class of 'Retired Fellows,' 'Retired Associates,' or 'Retired Licentiatees,' as the case may be, but in such case his interest in, or claim against the property of, the Royal Institute shall cease. The amount of the annual subscription payable by such 'Retired Fellow,' 'Retired Associate' or 'Retired Licentiate' shall be £1 1s. od., or such amount as may be determined by resolution of the Council, excepting in the case of those who have paid subscriptions as full members for thirty years, and who shall be exempt from further payment. A 'Retired Fellow,' 'Retired Associate,' or 'Retired Licentiate' shall have the right to use the affix of his class with the word 'Retired' after it, shall be entitled to receive the JOURNAL and *Kalendar*, shall be entitled to the use of the Library, and shall have the right to attend General Meetings, but shall not be entitled to vote. A 'Retired Fellow,' 'Retired Associate' or 'Retired Licentiate' shall not engage in any avocation which in the opinion of the Council is inconsistent with that of architecture. Nothing contained in this Bye-law shall affect the rights of persons who at the date of the passing of this Bye-law are members of the classes of 'Retired Fellows' and 'Retired Members of the Society of Architects.'"

OVERSEAS APPOINTMENTS

When members are contemplating applying for appointments overseas they are recommended to communicate with the Secretary R.I.B.A., who will supply them with any available information respecting conditions of employment, cost of living, climatic conditions, etc.

Competitions

The Council and Competitions Committee wish to remind members and members of Allied Societies that it is their duty to refuse to take part in competitions unless the conditions are in conformity with the R.I.B.A. Regulations for the Conduct of Architectural Competitions and have been approved by the Institute.

While, in the case of small limited private competitions, modifications of the R.I.B.A. Regulations may be approved, it is the duty of members who are asked to take part in a limited competition to notify the Secretary of the R.I.B.A. immediately, submitting particulars of the competition. This requirement now forms part of the Code of Professional Practice in which it is ruled that a formal invitation to two or more architects to prepare designs in competition for the same project is deemed a limited competition.

COMPETITION FOR PROPOSED STRUCTURAL ALTERATIONS: BIRKDALE CONSERVATIVE CLUB

The Competitions Committee desire to call the attention of members to the fact that the conditions of the above competition are not in accordance with the Regulations of the R.I.B.A. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime members should not take part in the competition.

ACKWORTH, NEAR PONTEFRAC: SCHOOL LIBRARY

Ackworth School, near Pontefract, Yorks, are to hold a competition for a small School Library. The competition will be open to members of the Society of Friends and Old Scholars of the School. The Assessors will be Mr. Hubert Lidbetter [F.] and Mr. J. J. Wood [A.].

Applications for the conditions should be sent in to The Bursar, Ackworth School, near Pontefract, Yorks, not later than 16 April 1935.

BIRMINGHAM: NEW MUNICIPAL OFFICES

The General Purposes Committee of the City of Birmingham invite architects of British nationality and practising in the British Isles to submit in competition designs for new Municipal Offices.

Assessor: Sir Reginald Blomfield, R.A., F.S.A.

Premiums: £1,000, £600, £400 and £250.

Last day for receiving designs: 28 June 1935.

Last day for questions: 30 March 1935.

Conditions of the competition may be obtained on application to Mr. Herbert H. Humphries, M.Inst.C.E., City Engineer and Surveyor, Birmingham. Deposit, £3 3s.

BISHOPSGATE: NEW POLICE STATION AND BUILDINGS

The Corporation of the City of London invite architects whose principal offices are within the City of London or the area of the Metropolitan Police to submit in competition designs for a new Police Station, Dwellings and Hospital in Bishopsgate.

Assessor: Mr. H. Austen Hall [F.].

Premiums: £250, £100 and £50.

Last day for receiving designs: 31 May 1935.

Last day for questions: 25 March 1935.

HERTFORD: NEW CENTRAL COUNTY BUILDINGS

The Hertfordshire County Council invite architects to submit, in competition, designs for new Central County Buildings to be erected at Hertford.

Assessor: Mr. Robert Atkinson [F.].

Premiums: £350, £250 and £150.

Last day for receiving designs: 1 October 1935.

Last day for questions: 1 July 1935.

Conditions may be obtained on application to The Clerk of the County Council, Clerk of the Peace Office, Hertford. Deposit £2 2s.

CROYDON: DEVELOPMENT SCHEME

The Corporation of Croydon are holding a competition for the lay-out and development of a site in the centre of the town.

Assessor: Mr. Thomas Adams, F.S.I., M.T.P.I. [F.].

Premiums: £500, and £350 to be divided between not more than three placed next in order of merit.

Last day for receiving designs: 30 April 1935.

Last day for questions: 31 January 1935.

KENDAL, WESTMORLAND: NEW COUNTY OFFICES

The Westmorland County Council invite architects of British nationality and practising in the British Isles to submit,

in competition, designs for new County Offices to be erected at Kendal.

Assessor: Mr. G. H. Foggett [F.].

Premiums: £200, £125 and £75.

Last day for receiving designs: 4 July 1935.

Last day for questions: 2 May 1935.

Conditions of the competition may be obtained on application to Mr. H. B. Greenwood, Clerk to the Westmorland County Council, Exchange Chambers, Kendal. Deposit £1 1s.

ROMFORD: NEW MUNICIPAL OFFICES

The Romford Urban District Council invite architects of British nationality and practising in the British Isles to submit in competition designs for new Municipal Offices at Romford.

Assessor: Mr. Kenneth M. B. Cross, M.A. [F.].

Premiums: £250, £100 and £50.

Last day for submitting designs: 29 June 1935.

Last day for questions: 30 April 1935.

Conditions of the competition may be obtained on application to The Clerk to the Council, Arcade Chambers, South Street, Romford. Deposit £1 1s.

SUTTON-IN-ASHFIELD: NEW COUNCIL OFFICES

The Sutton-in-Ashfield Urban District Council are to hold a competition for new Council Offices. The competition will be open to British architects in Nottinghamshire, Derbyshire, Leicestershire, Lincolnshire and Rutland. The Assessor is Major T. Cecil Howitt, D.S.O. [F.], and the premiums to be offered are £200, £100 and £50. Conditions are not yet available.

SWINDON: NEW MUNICIPAL OFFICES

The Corporation of Swindon invite architects of British nationality and resident in the British Isles to submit in competition designs for new Municipal Offices.

Assessor: Prof. A. B. Knapp-Fisher [F.].

Premiums: £350, £250 and £150.

Last day for receiving designs: 31 August 1935.

Last day for questions: 25 May 1935.

Conditions of the competition may be obtained on application to the Town Clerk, Town Hall, Swindon. Deposit £1 1s.

Members' Column

ASSISTANTS WANTED

ARCHITECTURAL ASSISTANT. To be suitably qualified, preference being given to candidates with accepted professional qualifications and training in architectural design and draughtsmanship. Salary £325, rising by annual increments, subject to satisfactory service, of £12 10s. to £350 per annum.

ARCHITECTURAL ASSISTANT. To be suitably qualified, preference being given to candidates with training in architectural draughtsmanship. Salary £237½ per annum, rising by annual increments of £12½, subject to satisfactory service, to £300 per annum.

Forms of application may be obtained upon application, enclosing stamped addressed foolscap envelope, to Mr. F. Willey, F.R.I.B.A., 34 Old Elvet, Durham. Last day for receiving applications, 15 April 1935.

FURNISHED OFFICE TO LET

Well lighted room, 15 feet by 12 feet 6 inches, to let furnished. Rent £75 a year, inclusive of lighting, heating and cleaning. Secretarial work by arrangement. Bloomsbury Square district. Apply Box No. 2535, c/o Secretary R.I.B.A.

COLLABORATOR WANTED

YOUNG ARCHITECT willing to collaborate on Competition work with architect in practice. Reply to Box No. 2235, c/o Secretary R.I.B.A.

CHANGE OF ADDRESS

MR. GODFREY SAMUEL [A.] moved his office on 1 April to 23 Haymarket, London, S.W.1. Telephone: Whitehall 2248. All trade catalogues and other communications should be sent to him at this address.

MESSRS. BAILLIE SCOTT AND BERESFORD, F.F.R.I.B.A., have removed to 12 South Square, Gray's Inn, London, W.C.1. Telephone No. remains unchanged (Holborn 1781).

DISSOLUTION OF PARTNERSHIP

MR. C. H. COPPACK [L.] has dissolved his partnership with Messrs. John H. Davies and Sons, of 14 Newgate Street, Chester, from 11 March 1935, and is now in practice at No. 35 White Friars, Chester.

TRADE CATALOGUES WANTED

MR. J. E. K. HARRISON [A.], 7 Carteret Street, Queen Anne's Gate, S.W.1, will be glad to receive, *by post only*, trade catalogues with particular reference to the construction and equipment of schools.

WANTED

AN ARCHITECT requires second-hand antiquarian drawing-board and tee-square in good condition.—Write Box 1435, c/o The Secretary R.I.B.A.

Minutes VII

SESSION 1934-1935

At the Seventh General Meeting of the Session 1934-1935, held on Monday, 25 March 1935, at 8 p.m.

Sir Giles Gilbert Scott, R.A., President, in the chair. The meeting was attended by about 170 members and guests.

The Minutes of the Sixth General Meeting held on 11 March 1935 having been published in the JOURNAL, were taken as read, confirmed and signed as correct.

The Hon. Secretary announced the decease of:—

George Bland, elected Fellow 1906.

Eustace Lauriston Conder, elected Fellow 1905.

Frank Richard Freeman, elected Licentiate 1912, Fellow 1933.

William Milburn, elected Fellow 1904. Mr. Milburn was President of the Northern Architectural Association and represented that body on the R.I.B.A. Council from 1912 to 1914.

Vincent Hooper, elected Associate 1904.

Raymond Sheppard, elected Licentiate 1911.

and it was Resolved that the regrets of the Institute for their loss be entered on the Minutes and that a message of sympathy and condolence be conveyed to their relatives.

The following members attending for the first time since their election were formally admitted by the President:—

FELLOWS

A. G. Hewlitt. Sydney Moss.

ASSOCIATES

J. Ferguson Cooper. H. J. Orchard.
Ralph G. Covell. K. F. Templeman.
Leonard H. McDermott. M. Hla Thwin.
George E. White.

LICENTIATES

C. G. Jones. H. Simcock.

STUDENTS

S. Wyard Bradshaw. R. Erskine.
A. G. Brown. W. J. Mulvey.
Leslie C. Chidley. Douglas J. Oliver.
John G. Davison. J. T. Sawday.
J. W. Drake. C. H. Weed.

Mr. Henry M. Fletcher, M.A. Cantab., Hon. Secretary R.I.B.A. [F.], having read a Paper on "The Work of Messrs. Smith and Brewer," a discussion ensued, and on the motion of Mr. W. Curtis Green, R.A. [F.], seconded by Mr. A. H. Lee, M.C., Secretary of the National Museum of Wales, a vote of thanks was passed to Mr. Fletcher by acclamation and was briefly responded to.

The proceedings closed at 9.45 p.m.

A.B.S. Insurance Department

HOUSE PURCHASE SCHEME

(For property in Great Britain only)

IMPORTANT CHANGES

The A.B.S. Insurance Department has for some years made a special feature of negotiating loans for house purchase for architects and their clients with a leading assurance office.

The scheme has now been revised, the amount of the loan being increased to 80 per cent. and the charges of the office's surveyor and solicitor being paid by the assurance office.

Revised Terms

Amount of loan	..	80 per cent. of the value of the property as certified by the surveyor employed by the office.
Rate of interest	..	5 per cent. (gross).
Repayment	..	By means of an endowment assurance which discharges the loan at the end of 15 or 20 years or at the earlier death of the borrower.

N.B.—The office does not usually undertake loans under the terms of this prospectus on:—

- Property of which the value exceeds £2,500,
- Property of the bungalow type, or where the accommodation is of such a nature as to render the property not freely marketable,
- Property not in the sole occupation of the borrower, but where such properties are acceptable special terms will be quoted on application.

Special Concessions to Architects

In the case of houses in course of erection, it has been arranged that provided the plan and specification have been approved by the surveyor acting for the office, ONE-HALF of the amount of the loan agreed upon will be advanced on a certificate from the office's surveyor that the walls of the house are erected and the roof on and covered in to his satisfaction.

Please write for full particulars and a quotation from the Secretary, A.B.S. Insurance Department, 66 Portland Place, W.1. Telephone: Welbeck 5721.

It is desired to point out that the opinions of writers of articles and letters which appear in the R.I.B.A. JOURNAL must be taken as the individual opinions of their authors and not as representative expressions of the Institute.

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